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Inside Dope

By George F. Taubeneck

T-Day
OPA the Bottleneck
Better Hurry!
What They Say
On the Job

T-Day

There's a new work around War Production Board headquarters now. It's "T-Day." This is officialese for the happy day when the present priorities system will be abandoned.

Not until production schedules have been firmly established for the war against Japan, and the schedulers know "where they're at," will that moment arrive.

Insiders believe that "T-Day" may be as far off as September.

Incidentally, the WPB folk have informally set the time for releasing household electric refrigerators from rationing controls as that date when the industry reaches a production rate of 100,000 units per quarter.

That sounds like a wild scramble to us.

OPA the Bottleneck

The atmosphere around WPB is all favorable to rapid reconversion. But it's a little different over at OPA. Over there they don't seem to recognize that labor and materials costs have gone up.

Many a manufacturer will be all clear to begin production of consumer goods, but will still be waiting to find out how much the OPA is going to let him charge for those goods.

If there's any bottleneck in the reconversion program, OPA seems likely to be the agency which will furnish it.

Congress is getting restive about the OPA, however, and may stir up something. Many influential Congressmen incline toward the view that adequate and bountiful production, not vise-like price control, is the true brake against inflation.

And if price controls are so rigid and so uneconomic that they hold up production, then unemployment and resulting lack of purchasing power will arrange matters so that a deflationary cycle will set in.

With labor costs apparently slated to rise again, and with sales costs again entering the picture, something has to give, somewhere.

Better Hurry!

In the last issue of the NEWS we announced the writer's 412-page book, "Great Day Coming!" which purports to give you the first comprehensive picture of the postwar future for the refrigeration, air conditioning, electronics and television, and home appliance fields.

Resulting orders have swamped both our bookkeeping and mailing departments, with a result that they are falling far behind. Within 10 days after the announcement appeared, 996 orders for this $3.00 book had arrived.

At that rate, the 1,500 copies published (all that's allowed us under our paper quota), will soon be exhausted. Better rush your order, if you want one.

What They Say

Incidentally, we've had some fine letters of appreciation about the book. Let us quote from some of the letters received from top industry executives who read advance copies of "Great Day Coming!":

". . . swell job . . . if everyone in the appliance and commercial refrigeration industry could read this book,

(Concluded on Page 11, Column 1)

Two Units Will Power Hotpoint Combination Job

CHICAGO — Hotpoint will manufacture a combination refrigerator-freezer, with two condensing units, to be ready for distribution at approximately the same time as its conventional refrigerators and home freezer, Ward R. Schafer, vice president, Edison General Electric Appliance Co., declared last week.

While refrigerator production depends on manpower and material supplies, Mr. Schafer asserted that a "trickle" of models would reach dealers during 1945, and that prices would be only slightly higher than 1942 prices.

The new combination unit will be operated from two separate compressors, powered by two motors,

(Concluded on Back Page, Col. 1)

Federal Trade Body Orders End to AMC Purchasing Practice

NEW YORK CITY — Associated Merchandising Corp., 1440 Broadway, New York, and 21 member corporations which individually operate department stores in large cities throughout the country, have been ordered by the Federal Trade Commission to discontinue knowingly inducing and receiving discriminatory prices on purchases of merchandise from manufacturers, producers, and suppliers, in violation of Section 2 (f) of the Robinson-Patman Act.

(Among the products bought and retailed by the stores under these arrangements was the A.M.C. electric refrigerator, on which considerable volume was attained in the years immediately preceding the war.)

A.M.C. was created and is operated by the respondent members, the Commission finds, as an agency and means whereby they are enabled to act collectively to obtain special

(Concluded on Page 29, Column 1)

An Eyewitness Account Of Refrigeration's Role In Okinawa Battle

By W. H. Knowlton
The American Red Cross

OKINAWAN INVASION FRONT —American refrigeration equipment is helping to save the lives of countless soldiers injured in the terrific battles to gain control of this island by preserving supplies of whole blood that is flown to field hospitals here. On a tour of island installations I first saw refrigerated reefer boxes sitting in the open near hospital tents, readily accessible to hard working surgeons. A sign on the door read, "Whole Blood—Do Not Open Without Authorization."

The reefer was manufactured by Hussmann-Ligonier Co. of St. Louis. Refrigeration was provided by an air-cooled "Freon" compressor driven by a 4-cylinder gasoline engine. Nearby a single Servel kerosene refrigerator stood in the dust, protecting precious serums and medicines. Later I saw similar equipment at other field and holding hospitals, all landed with the assault wave of the invasion.

As huge motor generator sets come ashore, more refrigeration will follow. At our staging base I saw a number of York's Flak-ice machines that will be shipped here with Tenth Army equipment. Thinking

(Concluded on Back Page, Col. 4)

Refrigerator Reconversion On Piecemeal Basis Likely; Order L-38 Is Revoked

* * *

Reconversion Steps

WASHINGTON, D. C.—A number of programs and procedures to smooth the path to reconversion were outlined late last week in WPB's official announcement on reconversion policy. Among those that may be significant to the refrigeration and air conditioning industry, and the appliance industry, are the following:

CMP Open-Ended

The Controlled Materials Plan will be open-ended effective July 1, 1945, so as to permit the delivery after that date, without CMP allotments, of steel, copper, and aluminum, where delivery can be made without interference with authorized CMP orders.

In other words, orders may be placed immediately for deliveries to be made after July 1, 1945. During the remainder of the second quarter, however, deliveries can be made only on authorized CMP orders. It must be clearly understood that permission to place an unrated order does not guarantee delivery of that order. For example, sheet steel may continue tight and deliveries on unrated orders may not be possible for some time.

Spot Authorization Plan

For the balance of the second

(Concluded on Page 4, Column 1)

* * *

L-38 Restrictions Off

WASHINGTON, D. C.—WPB has revoked Order L-38, the limitation order for the commercial refrigeration and air conditioning industry.

This means that the restrictions in Order L-38 on the production and sale of equipment are no longer in effect. Also revoked were Directions 1, 2, and 3 to L-38, covering permitted production of evaporative or "desert" air conditioners, mechanically refrigerated farm milk coolers, and refrigerated display cases.

The action taken does not affect any other WPB order or regulation touching the production or delivery of these items.

Schedules I, III, and VI of Limitation Order L-126, which set up required specifications for various types of refrigeration equipment, were revoked.

WPB officials were quick to point out, however, that the revocation of

(Concluded on Back Page, Col. 2)

* * *

No 'Go-Ahead' Yet

WASHINGTON, D. C.—The household mechanical refrigerator industry was still on the "yellow light" awaiting a final go-ahead signal for reconversion, following WPB's formal post-VE day announcement of reconversion policies and procedures.

Chairman J. A. Krug said that orders limiting the production of civilian hard goods "will be revoked progressively as resources are released," but that orders to be retained "at least for some time," included:

L-5-c (household mechanical refrigerators); L-23-b (electric ranges); L-23c (stoves and non-electric cooking appliances); and L-265 (radios).

There was some indication that the "spot authorization" plan would be used to assist those companies producing consumer durable goods, who had adequate facilities and manpower, to go ahead with production of civilian goods. (This might seem to indicate that no effort would be made to give all manufacturers in a particular industry an "even start.")

(As we go to press, WPB has issued a survey on the reconversion problems and possibilities of various industries, and reports that it will be six months before the household refrigerator industry can be expected to produce even at the minimum rate, and a year before maximum capacity will be reached. Commercial refrigeration should achieve some considerable production in three months, it was prophesied.)

Those manufacturers in the household mechanical refrigerator field who would make a statement were very much on the cautious side, and all said that more "go ahead" moves by the government would be needed. P. M. Bratten, sales manager of Frigidaire Division of General Motors, declared:

"Frigidaire did not receive any authorization from the WPB for production of household refrigerators on or before Wednesday, May 16. Therefore, Frigidaire can not carry out any accurate estimates of quantities or the date production will be resumed on this product. At the present time, however, the best guess of the Frigidaire management is that some household refrigerator products will be available sometime this fall.

"Frigidaire had been permitted to build a few electric ranges, and we expect to receive authorization to build limited quantities within the next 10 days.

"For the past few months, we have been producing a limited number of commercial refrigeration compressors and cooling units that were subject to sale on a priority basis. Priority restrictions on this commercial refrigeration equipment have now been removed. Frigidaire's ability to fill unrated orders still depends entirely upon the availability of materials and labor to increase manufacturing schedules.

"It is very important for everyone to keep in mind the fact that certain materials and machine tools are still very critical, and the resumption of production of additional peacetime products involves considerable rearrangement of production facilities, as well as the securing of the necessary manpower to do this work."

T. J. Newcomb, sales manager of the Westinghouse Electric & Mfg. Co.'s Appliance Division, said that while information had been submitted on reconversion to government agencies, "we have been given nothing

(Concluded on Page 4, Column 4)

Heck Sees Stabilized Market For Freezers

MANSFIELD, Ohio — Allyn R. Heck, newly appointed merchandise manager of the household refrigeration department of the Westinghouse Electric & Mfg. Co.'s appliance division here, believes home freezer sales will maintain a steady volume of between 300,000 and 400,000 unit sales a year, after the first heavy postwar demands are met.

Mr. Heck, whose appointment was recently announced by G. H. Meilinger, household refrigeration manager of the division, added that "Westinghouse also looks for the largest refrigerator business in our history."

While anticipating "substantial

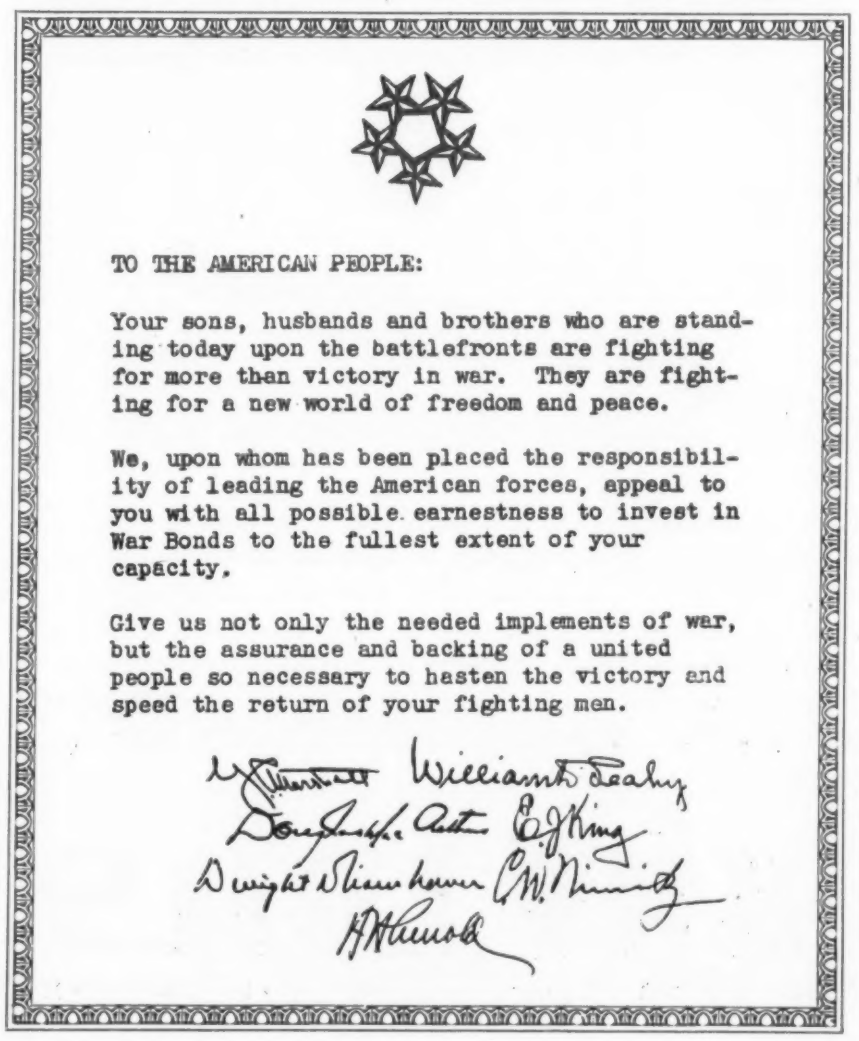
(Concluded on Page 29, Column 3)

Carter Heads Kelvinator Ice Cream Cabinet Division

DETROIT — Appointment of Don H. Carter as sales manager of the Kelvinator Ice Cream Cabinet Division has been announced by Edward R. Legg, assistant general sales manager, Kelvinator division, Nash-Kelvinator Corp.

Mr. Carter, who has an extensive background of both factory and field experience, joined Kelvinator 15 years ago. After several years in dis-

(Concluded on Page 29, Column 4)



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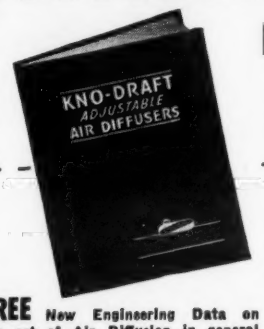

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In Kelvinator Job

DON CARTER

Just appointed manager of the Kelvinator Ice Cream Cabinet division.

Hunter Directs Sales For Master-Bilt Co.

ST. LOUIS—C. J. Hunter has been appointed director of sales and research for the Master-Bilt Refrigeration Mfg. Co. here.

Mr. Hunter for the past four years has been chief of the refrigeration division of the Rural Electrification Administration. He is active in the St. Louis section of the A.S.R.E.

New Electronic Defroster May See Many Uses With Frozen Foods

Claimed To Improve Texture, Taste of Foods; Could Become Another Standard Appliance

NEW YORK CITY—Development of an electronic defroster has been announced here as likely to find widespread postwar commercial and household applications in defrosting frozen foods almost instantly, while preserving their taste, texture, and nutritive value.

It was disclosed that high frequency heat, the electronic miracle whose wartime service includes the dehydrating of Army K rations, has been successfully harnessed by the Great Atlantic & Pacific Tea Co. as a high-speed defroster of large quantities of frozen foods.

'BROADCASTS' HEAT

"In much the same way that a radio station transmits sound, this device 'broadcasts' a beam of dielectric heat throughout a solid block of frozen food, thawing it in minutes instead of hours or days," explained H. W. Gilb, director of the A. & P. company's national bakery division, which has been experimenting in the new field.

"The net result of our efforts will be to enable the food industry to move perishables from producer to consumer in better condition than has ever before been possible."

It was announced that the most recent dielectric test conducted at the Newark, N. J., laboratory of the Federal Telephone & Radio Corp. by Dr. William Cathcart, head of the A. & P. baker laboratories, resulted in successful quick-thawing of fully ripened peaches, which are among the most highly perishable foods.

30 LBS. IN 15 MINUTES

Thirty-pound cartons of the fruit, solidly frozen and normally requiring 20 hours to defrost safely, were thawed in less than 15 minutes with the aid of the megatherm high frequency process.

Early development of a small consumer-type device to be used like an electric toaster for defrosting packaged frozen foods was predicted by Federal Telephone officials. Another development, it was said, may be a quick-defrosting attachment for postwar home freezer cabinets.

It was explained that the new defrosting method involves use of an "oven" in which the floor and ceiling are insulated metal plates or electrodes which are connected to a high frequency generator. Frozen food that is placed between these plates is subjected to what Dr. Cathcart described as an electronic uniform heating. Employing high-powered vacuum tubes, the new equipment produces dielectric heat which reaches the core of the frozen substance and its surfaces at the same time, thus producing uniform defrosting.

Defrosting by electronic means is achieved so rapidly, it was pointed out, that there is no chemical breakdown in the structure of the food such as occurs under normal thawing procedure. Thus, it is possible to retain the color, firmness, and texture of tree-matured fruits and vine-fresh berries.

MAY COOK IT, TOO

Another possibility for dielectric heat was seen in the fact that it cooks as well as defrosts. Dr. Cathcart said that if the defrosted food is allowed to remain in the "oven" after it is fully thawed, it actually begins cooking. Food prepared in this manner would be done in much shorter time and be uniformly well-done or rare throughout, just as the defrosting is uniform.

Dr. Cathcart expressed satisfaction with other recent experiments in defrosting frozen eggs. Storage of frozen eggs requires considerable space in large-scale bakery operations, and additional room is necessarily tied up by the tedious defrosting process. Under the new method, Dr. Cathcart said, thousands of hours of waiting time would be saved annually at A. & P.'s 37 bakeries as frozen eggs and other ingredients move quickly through the electronic beam into dough and batter mixers.

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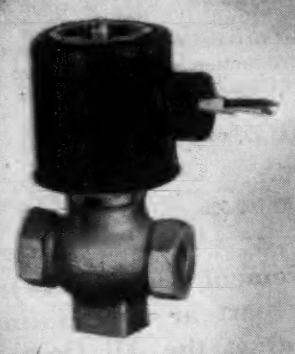
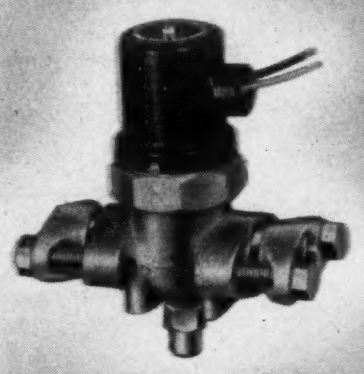
1. POWERFUL — Ample power to lift against high pressures.
2. QUIET—Design of plunger and guide tube minimizes objectionable a-c hum.
3. EASILY INSTALLED—Substantial mounting boss on valve body makes for easy, rigid installation.
4. LONG-LIVED—Valve bodies are of close-grained, non-porous cast brass.
5. Coils are of moisture-proof construction.
5. POSITIVE CLOSING — Nonmagnetic needle and seat and strong "kick off" spring assure tight closing.
6. EASILY SERVICED — Can be disassembled and cleaned without disconnecting refrigerant lines or wiring.
7. ECONOMICAL—Draw little current. Replacement parts if required are inexpensive.

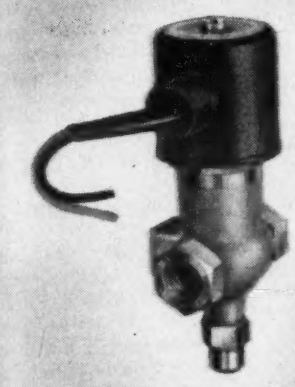
Specify "DL" solenoid valves and take advantage of these features.



No. 683-3—This reliable valve, like all "DL" solenoids is designed for use with any fluid that will not attack brass. Furnished with three sizes of orifices, 1/8", 3/16" and 7/32".
Nominal capacity—liquid line
1/8" orifice 1-1/3 tons Freon 2-3/4 tons Methyl
3/16" orifice 3 tons Freon 6-1/2 tons Methyl
7/32" orifice 3-3/4 tons Freon 8-3/4 tons Methyl
3/8" female N.P.T. connections.



No. 686—The No. 686 is a heavy duty, large capacity pilot operated valve which requires a pressure drop of 1-3/4 psi to operate the piston when used with refrigerants, 5 psi on water. It is made with 2 sizes of orifices, 1/2" and 5/8". Available threaded or flanged for various size tail pipes.
Nominal capacity—liquid line
1/2" orifice 11 tons Freon 23 tons Methyl
5/8" orifice 17 tons Freon 34 tons Methyl



No. 681—The No. 681 is of the pilot operated type and requires a minimum pressure drop of 1 psi to operate the piston.
Nominal capacity—liquid line
3/8" orifice 7-1/2 tons Freon 17 tons Methyl
1/2" female N.P.T. connections.

FOUR WIRE COIL

One of the features of "DL" solenoids preferred by jobbers and service men is the dual 115-230 volt 4 lead coil. This coil can be used on either 115 volt 60 cycle or 230 volt 60 cycle current by connecting the 4 leads in the right sequence. Correct wiring diagram is shown right on the coil-housing—a great time saver

Drying A REFRIGERATION SYSTEM

★ ★ ★

Cartridge Dryers — Mechanical and Chemical

While it is necessary to use heat and vacuum or heated dry air to dry out a refrigeration system which has a large amount of water, cartridge dryers are very useful for removing small residues of moisture. Also their use—either permanently or at intervals—helps protect the system against accidental introduction of moisture.

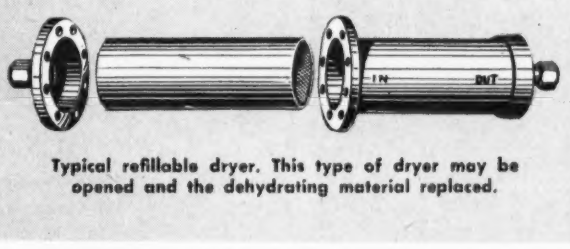
Cartridge dryers are usually placed in the liquid line, between the receiver and the expansion valve. The liquid refrigerant flows through the cartridge, and moisture in the liquid is caught and held by the drying material within the cartridge.

Two Types of Cartridge Dryers

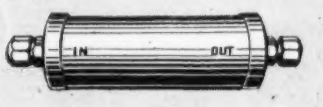
Cartridge dryers are of two general types—the mechanical, or adsorption type; and the chemical type.

The "Adsorption" Type

The adsorption type of dryer is packed with a material which, finely divided, presents an enormous surface to which moisture may cling by capillary attraction. This process is known as "adsorption". The moisture is not changed chemically—still exists as moisture. Silica gel, activated alumina and zinc moss are adsorption materials commonly used.



Typical refillable dryer. This type of dryer may be opened and the dehydrating material replaced.



Typical sealed dryer. Dehydrating material sealed in—not replaceable.

May Be Left In System

While adsorption type dryers often work more slowly than the chemical, they have the advantage that they may be left in the system indefinitely without harm. They do not heat, and seldom give trouble by powdering.

Chemical Dryers

Chemical dryers are packed with a material which takes up water by chemical action. A common material which is sometimes used in chemical dryers is calcium oxide, or "quicklime". Most people remember the chemical laboratory experiment where a few drops of water are placed on a lump of quicklime. The lime gets hot, and then disintegrates into a dry powder. If not too much water is used, the moisture vanishes completely.

A number of materials have this property of entering into chemical combination with water. They will remove water from a refrigerant liquid. In addition to calcium oxide, calcium sulphate, calcium chloride, barium oxide and certain other chemicals are used in drying operations. Commercially prepared chemical dryers generally contain one of these chemicals.

Properties of Chemical Dryers

One of the refrigerant manufacturers lists the properties of these chemical dryers substantially as follows:

"Anhydrous Calcium Sulfate—prepared in granular form, or cast in sticks. Dusts somewhat, but does not cause trouble.

"Calcium Oxide—removes water and acid by chemical action. Dusts somewhat, cannot be used with sulfur dioxide but is satisfactory for other refrigerants. Rates as a fair dryer with a tendency to powder if excess moisture is present.

"Calcium Chloride—may be used with all refrigerants, but is not rated as a dryer capable of reducing moisture content to a low level. Excess moisture produces a solution which is highly corrosive. Should be used with caution.

"Barium Oxide—removes moisture by chemical action . . . powders badly after reaction with water.

"Phosphorus Pentoxide—an excellent dryer, but its fine powdery form makes it difficult to handle and produces excessive resistance to flow of gas or liquid. A mixture with quartz has been accorded limited use."

It must be noted that nearly all of the chemical dryers give off considerable heat when absorbing moisture. Barium oxide and calcium chloride are likely to be particularly active in heating. As a result, many service men are instructed not to leave the job when a barium oxide dryer is used. A usual procedure is to put the dryer on for an hour or more while the service man watches it. It is then removed, and often replaced by an adsorption type dryer.

Generally it is not recommended that any chemical dryer be left in the system longer than 24 hours.

Cartridge dryers are extremely useful—should be a part of the service man's equipment. However, they should always be used with careful attention to the directions, and only on the refrigerants specified by the dryer manufacturer.

Reprints of these articles, punched to fit your service book, available on request. Write for your copy.

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Reconversion Steps--

(Concluded from Page 1, Column 3)

quarter, the spot authorization plan will continue as at present. After July 1, the plan will be used only for the authorization of greater production than is allowed under the few remaining orders limiting hard goods output, subject to manpower clearances on larger producers in tight labor areas and a check as to materials availability.

Even in these cases, the spot plan will no longer be used as a means of granting affirmative priorities assistance. The Z-1 allotments and preference ratings given to manufacturers under the spot authorization plan will become invalid as of July 1.

With the revocation of most production restrictions and the open-ending of CMP, production of the sort previously authorized under the "spot" plan will generally be free to proceed on an unrated basis without special authorization.

Manpower Clearances

In Group I and II WMC Labor Areas manpower clearances will be required for increases in programmed production, but only for plants with more than 100 wage earners. These manpower clearances will not be required for unrated civilian production, except in the case of "spot" authorizations under the remaining production control orders.

Smaller Manufacturers

A new regulation, PR-27, is being issued giving to manufacturers, including veterans and new enterprises, who produce less than $50,000 worth of products per quarter, the right to use AA-4 preference ratings and to place deferred (Z-3) CMP orders for their production materials. This regulation is designed to help smaller manufacturers to get their fair share of production materials. The AA-4 rating may not be used to get textiles and related products, which are governed by special orders of WPB.

Preference Ratings

The present rating system will continue for the third quarter, 1945. The emergency AAA Preference Rating and individual directives will also be continued. The WPB Field Offices will be given authority to give "spot" ratings and assistance with a greater latitude than is presently authorized. This will include uprating from deferred allotments to firm allotments for "spot" assistance on civilian production, as well as higher ratings when such action is clearly necessary.

Scheduling

Current scheduling procedures will be maintained for components and products in very tight supply where preference ratings alone do not suffice to meet urgent programs on schedule. The number of scheduled items will be substantially reduced.

Surplus Materials

Priorities Regulation 13 has been revised to permit the movement of surplus steel, copper, and aluminum on an unrated basis for uses no longer restricted by WPB Regulations. Relaxations with respect to other materials will be added from time to time.

Distribution Controls

Distribution controls governing the flow of end items, including the use of WPB-547 (PD-1X) will generally be retained through the third quarter, but will then for the most part be removed, except where clearly necessary to prevent genuine and widespread hardship, irreparable damage, or failure to meet such needs as public health and safety.

Consumer rationing will be retained only for items remaining in serious short supply and necessary to assure fulfillment of war supporting and critical civilian needs. It is not proposed to ration consumers' items not now under control except to meet presently unforeseeable emergencies.

Exports

Export licenses and quotas will be retained where needed to prevent undue drains on domestic supplies.

Preparation for Reconversion

Action is already being taken to assist industry to get ready for civilian production by giving priorities for the acquisition of bottleneck machine tools and for limited construction required to start production at a minimum economic rate.

PR-23 on Experimental Models has been mended, easing the requirements in connection with experimental models.

Current Production Compared with Contemplated Peacetime Production of Industries Reporting Contemplated Peacetime Production

Industry	Current Production Per Quarter	Minimum or Breakeven Rate of Production Per Quarter	All Out or Capacity Production Per Quarter
Electric Ranges, Domestic	0	$ 4,400,000	$11,000,000
Refrigerators, Domestic Mech.	$141,225,000	$30,589,000	$93,251,000
Commercial & Industrial Refrigeration & Air Conditioning Equipment	$ 58,700,000	$30,000,000	$65,000,000

New Construction Requirement (in dollars) Needed Before Operations Can Start at the Minimum or Breakeven Rate and at the All Out or Capacity Rate

Industry	Minimum or Breakeven Rate	All Out or Capacity Rate
Electric Ranges, Domestic	0	$ 111,000
Refrigerators, Domestic Mechanical	$1,929,000	$7,855,000
Commercial & Industrial Refrigeration & Air Conditioning Equipment	0	$7,000,000

Value of Equipment and Tools Required Before Operation Can Start at the Minimum or Breakeven Rate of Production and the All Out or Capacity Rate

Industry	Minimum or Breakeven Rate	All Out or Capacity Rate
Electric Ranges, Domestic	$ 250,000	$ 500,000
Refrigerators, Domestic Mechanical	$4,353,000	$13,013,000
Commercial & Industrial Refrigeration & Air Conditioning Equipment	0	$ 3,000,000

Reconversion Time Required

Industry	Minimum or Breakeven Rate	All Out or Capacity Rate
Refrigerators, Domestic Mechanical	6 Months	12 Months
Domestic Laundry	4 Months	6 Months
Commercial & Industrial Refrigeration & Air Conditioning Equipment	3 Months	9 Months

* * *

Presented above are results of preliminary studies by WPB on problems of reconversion faced by the household and commercial refrigeration and air conditioning, electric ranges, and laundry equipment industries.

The studies show present production rates by quarter, of the industries at minimum and capacity rates; the amount of constructon (in dollar value) needed to reconvert plants for both minimum and capacity production; the industries' machine tool requirements; and the length of time estimated for partial and complete reconversion.

Godfrey of Frigidaire Elected President of GM Institute

FLINT, Mich. — At the annual meeting of the regents of the General Motors Institute, held in Flint, Edward R. Godfrey, general manager of the Frigidaire division of General Motors was elected president and chairman of the Board of Regents.

The General Motors Institute is a technical training school.

No 'Go-Ahead' Yet--

(Concluded from Page 1, Column 5)

but generalized statements about the production of some domestic goods being resumed as war needs become less urgent.

"The military authorities have not yet officially announced any cutbacks that materially affect current production, and no program for production of refrigerators or washing machines have been cleared by WPB.

"Many reconversion bottlenecks have been anticipated which have permitted us to order with priority assistance machine tools, equipment, construction materials, etc. We also have detailed materials orders in the hands of our suppliers covering three months' production requirements for all of our products, but the suppliers can do very little about shipping these orders for materials until a new program of priority assistance is developed.

"We still hold to our previous estimate as to when new products will be available—production resumed in five to six months, full capacity in eight to nine months."

STANGARD
PRIME SURFACE *Cold Plates*
FOR MAXIMUM EFFICIENT REFRIGERATION

★ For Locker Plants, Sharp Freezing, Ice Cream Cabinets, Hardening Rooms, Soda Fountains, Storage Rooms, Milk Coolers, Liquid Cooling, Food Counters and other similar uses.

Write us today for complete information and catalog.

Stangard Facilities are contributing to the production of materials for our National Defense.

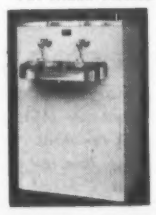
THE STANGARD-DICKERSON CORP.
46-76 Oliver Street, Newark, N. J.

Honeywell provides the answer with the Polartron *System* of Automatic Defrosting Control. — Applicable to all "above freezing" fixtures the Polartron System provides for temperature "Cut-out" and Pressure "Cut-in" operation thus assuring positive defrosting at the end of each "on" cycle. Take advantage of the full capacity built into your refrigeration equipment — use the Polartron System. See your jobber for further details. Minneapolis-Honeywell Regulator Company 2807 Fourth Avenue South, Minneapolis 8, Minnesota. Branches and distributing offices in all principal cities.

MINNEAPOLIS oneywell
CONTROL SYSTEMS

The Polartron System of
FROST-FREE REFRIGERATION

Cafeteria Type
WATER COOLERS
For MESS HALLS • HOSPITALS • PLANTS



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Remote and Cabinet Models
Capacity 88 gals. in 2 hour period
For all applications
Quick Shipments
Write for Details

FILTRINE MANUFACTURING CO.
33 Lexington Ave. Brooklyn 5, N. Y.
For Over Filtrine HIGH EFFICIENCY 40 Years

Electrimatic
AUTOMATIC CONTROL VALVES AND REGULATORS
2100 INDIANA AVENUE • CHICAGO 16, ILL.

RETAIL-MINDED KELVINATOR

Not just words...a business future!

"Retail-Minded Kelvinator" is more than a phrase . . .

It sums up the whole meaning of the Kelvinator franchise and the Kelvinator way of doing business.

It means a sounder way of business thinking . . . a better way of business life for the men who make up the finest retail organization in the appliance industry.

It means a future for those who become a part of this retail organization . . . a position of dignity and importance in their communities . . . and sounder business opportunity for the long pull *after* the first big years of the postwar boom are past.

The principle of "retail-minded thinking," on which the Kelvinator Franchise is based, has set new standards in business and human relations for this industry because its main premise is this: *Kelvinator feels that no sale is completed until the product leaves the retailer's floor.*

Every word, every thought in the Kelvinator Franchise is conditioned by this basic "retail-minded" concept. That is why the Kelvinator Franchise provides for . . .

A Limited Number of Dealers . . . with each dealer big enough to cover his market and each market adequate to insure a sound, highly-profitable return . . . year in and year out . . . on his investment of time, money and effort. And the net result of this Kelvinator *selective* market and dealer policy is . . . *more sales per dealer.*

Retail-Minded Product Policies . . . a line of products so simplified and compact as to reduce retailer's investments in inventory to the lowest in the industry. This retail-minded policy enables Kelvinator Retailers to concentrate on high-unit-of-sale, volume products . . . with no slow-moving, low-volume models to raise inventory costs and cut turnover.

Competitive Prices . . . Kelvinator's aim will be to continue its competitive pricing policy with a proven step-up plan offering visible, salable features and values at each step . . . thus providing a much higher unit per sale.

Retail-Minded Merchandising . . . advertising, sales promotion and a full sales training program built from the retailer's point of view and designed to move products off the floor into the homes of users.

This is what "Retail-Minded Kelvinator" means . . . This is why Kelvinator Retailers know that the Kelvinator Franchise is the most valuable in the industry today!

The most Valuable Franchise in the Appliance Industry

LOOK AHEAD WITH RETAIL-MINDED

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION

Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing

Tune In

Every Sunday 4:30-5:00 P. M. EWT for the new NASH-KELVINATOR RADIO SHOW, starring the ANDREWS SISTERS—Over the entire Blue Network.

American Bankers Association Backs Banks, Plan To Handle 'Time' Paper

President Says It Will Help Set Up New Dealers; Assn. Publishes Manual on Appliance Financing

NEW YORK CITY—Plans made by 7,000 banks in all sections of the country to offer or expand their services in the field of consumer credit to include purchase of time sales instalment paper from merchants will make possible the opening of new retail outlets in every community for the sale of consumer goods, declares Carl M. Flora, chairman of the Consumer Credit Committee of the American Bankers Association, who is also vice president of the First Wisconsin National Bank, Milwaukee.

One of the principal problems to be solved when the war ends will be distribution of the tremendous volume of goods and services, estimated at approximately $135 billion, and supplying some 55 million jobs. "If the manufacturers do not have a market for their output, production will soon cease and unemployment will result," Mr. Flora said.

"Remember consumers, not manufacturers, create jobs. We can provide no more jobs to build automobiles, refrigerators, and radios than we can find ways to finance and distribute these goods. Consumer credit has created mass markets and has made possible mass distribution, which in turn has resulted in mass production and lowered costs leading ultimately to a higher standard of living for the American people," he continued.

"Use of bank facilities to aid families in financing purchases of such items as washing machines, ranges, refrigerators, and vacuum cleaners, and to provide retail dealers with adequate funds to maintain displays and stocks of these items should multiply the outlets from manufacturers of the nation to an important degree."

As a first step in putting this national program among banks into operation, the Consumer Credit Committee of the A.B.A. has just published a manual entitled, "Home Appliance Financing." It was written after a study of such loan operations in banks which have been successful in the consumer credit field.

The subject matter of the manual is divided into two parts. First, "Retail Paper Purchased," explaining steps taken in transferring time sales obligations from the merchant to the bank, and second, a "Wholesale Floor Plan," whereby the bank provides financing to meet dealer's requirements for merchandise purchases, and presents illustrations of basic forms used in the various transactions.

This manual has been prepared to assist banks interested in purchasing retail instalment paper on household appliances and equipment, and in extending the necessary supplementary wholesale floor plan credit to dealers. Because of the variance in state laws, suggestions are of a general nature, and the manual advises assistance of the bank's counsel before participation in this type of financing. Because this type of operation puts a bank in direct contact with the public and may be important in establishing sound relationships with new customers, "it is a banking function worthy of dignified and considered treatment."

Jones Chief Engineer For 'Airkem' Concern

NEW YORK CITY — C. Gordon Jones has been named chief engineer of W. H. Wheeler, Inc., distributor of "Airkem," described as a "chlorophyll air freshener."

For 15 years Mr. Jones was with the Bell System in design, development engineering; operating and service engineer with A.T.&T.; consulting engineer with Electrical Research Products, Inc.

Refrigeration Exchange In Atlanta Expanding For Rebuilding Work

ATLANTA — Refrigeration Exchange, Inc., has purchased the two-story building it occupies at 237-245 South Pryor St., this city, and has converted the structure into one of the most modern and complete plants of its kind in the South. The building covers more than 17,000 square feet.

Offices and display rooms occupy the first floor, while the entire second floor is devoted to the service department and manufacturing shop, where freezing cabinets and special refrigeration equipment are built. The service department, including a metal shop and a wood shop, is believed to be the largest in the South.

Carl H. Cofer heads the service department, which specializes in service for both household and commercial refrigeration equipment.

The company now features C. V. Hill and Tyler commercial refrigeration equipment and after the war will handle Kelvinator domestic refrigerators, Bendix washing machines, and other household appliances.

The firm also offers one of the largest stocks of used equipment in the area, including meat cases, reach-in boxes, beverage coolers, walk-in coolers, meat blocks, and scales.

Ed Rawls, a refrigeration engineer for 25 years, heads the company. Harry Wilson is vice president.

Army Needs Its Bread Fast, So It Cools Slicing Machines

HAWAIIAN ISLANDS (Special)—One of the latest uses for mechanical refrigeration by the army at a large military station here is in connection with an up-to-the-minute bread slicing machine. To facilitate the cutting and wrapping of the countless loaves of bread consumed each day by hungry fighting men, the military bakers are using bread slicing and wrapping machinery.

The machine, recently placed in service here, was built by the Oliver Machinery Co. of Grand Rapids, Mich., and is equipped with a conventional ½-hp. methyl chloride refrigeration compressor, which is connected to three special brass plates that are an integral part of the machine.

After the bread is sliced and automatically wrapped it is passed over the cold plate which "seals" the wax paper on the two ends and bottom. Refrigerant connections to the sealing plates are flexible, permitting the plates to move back and forth rapidly as the machine operates. Use of mechanical refrigeration for this purpose permits rapid operation of the machine, even under tropical conditions encountered in this climate.

'Weather Test' Chamber Results In Perfection Of New Mine Detector

SYRACUSE, N. Y.—A new type of highly sensitive land mine detector has been developed and put into use on battle fronts as the result of invention of a "rectifier" making the detector impervious to weather conditions.

Hitherto, the detectors have been sensitive to weather and their action often unreliable as a result. Consolidated Conditioning Corp. installed controlled "test weather" in the New York laboratory of the Horni Signal Mfg. Co., and this led to creation of the rectifier eliminating weather-induced erraticism on the part of the detectors.

The test weather varied from Arctic cold to tropical heat. The land mines are regarded by Army officials as a major menace.

Mr. Peabody got it in the neck

MR. PEABODY doesn't approve of air conditioning.

He says he felt it once. He was in a movie, a cold draft got him in the back of the neck and he has been stiff-necked about air conditioning ever since.

Well, the cold, clammy gust of air that blew down Mr. Peabody's neck didn't come out of a real air conditioning system . . . it just *couldn't* have!

We'd like to put Mr. Peabody straight. That shouldn't be difficult for he's been in lots of properly air conditioned places since . . . without getting so much as *one single* pain-in-the-neck.

Real air conditioning, Mr. Peabody, isn't blasting cold air around for a while and then turning it off. Real air conditioning is a science and an art . . . providing *clean, evenly distributed, draughtless air with precisely controlled temperature and humidity . . . day in and day out, summer and winter.*

That's why, when you go into a store or restaurant or movie that is Carrier conditioned, you don't feel chilly or clammy. You are simply agreeably refreshed . . . truly comfortable . . . and you begin to think nice thoughts about the proprietor.

As it has for the past 42 years, Carrier plans to devote its efforts solely to the important task of bringing you the finest in air conditioning and refrigeration . . . as promptly as war responsibilities permit.

Many developments and improvements have come out of Carrier's wide wartime experience—to open up broader peacetime markets and create greater opportunities for Carrier dealers.

CARRIER CORPORATION • SYRACUSE, N.Y.

Carrier

AIR CONDITIONING • REFRIGERATION

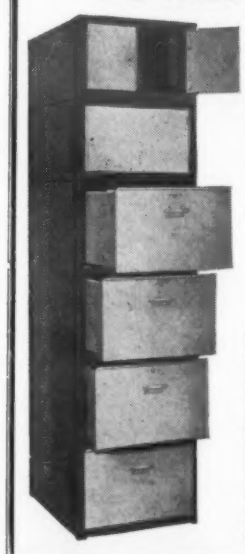
Bowen REFRIGERATION SUPPLIES, INC.

Atlanta Jacksonville
Tampa Charlotte

"The South's Largest Refrigeration Supply Jobber"

A-S-E FROZ-N-FOOD LOCKERS

INCREASE PROFITS with this LOCKER LINE



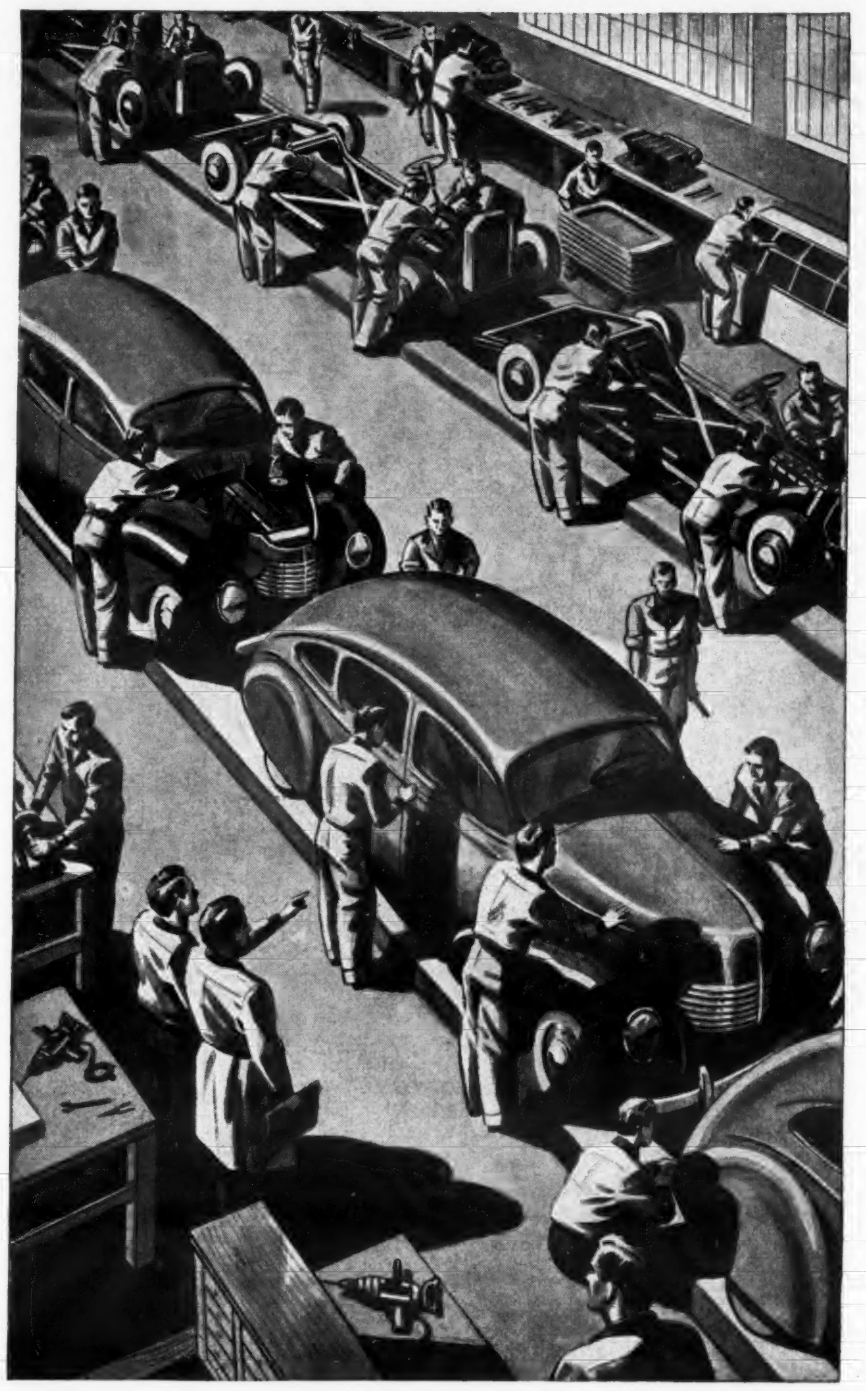
For more profits, sell A-S-E Froz-n-Food Lockers. Note these features:

- Glide - easy drawer action
- Sturdy steel construction
- Rich two-tone finish
- Shipped factory assembled

A-S-E Froz-n-Food Lockers have earned the nation-wide preference of locker users . . . they're the attractive lockers that mean profits for you, satisfaction for your customers. Write today for additional information.

ALL-STEEL-EQUIP COMPANY, INC.
450 GRIFFITH AVE. AURORA, ILL.

Enjoy this EXTRA BENEFIT from your first year's selling!



• *Build the volume sales you will need at once during reconversion*

• *Get set solidly with dealers and consumers when competition intensifies*

Get quick sales with your first year's factory output ...get set for later competition

You can use your first year's factory production to get sales volume, quickly, while at the same time establishing dealer support against the time when initial buying drops off and selling gets tough.

If limited production will not permit you to do an adequate job everywhere, *you can get going quickly* in the Chicago market and cash in on the buying assured by diversified income from factory, farm and trade.

Single medium reaches $4,496,734,000 market

Right in this compact area is a great pent-up demand for autos, washing machines, refrigerators, "big-unit" products generally . . . *plus* huge savings and a demonstrated responsiveness to selling.

Get set now with experienced dealers who, with their customers, can be reached through one powerful medium, the Chicago Tribune.

Throughout the Chicago market the Tribune is bought, read and *bought from* as is no other medium. It hits with a sales impact that gets sales *action*.

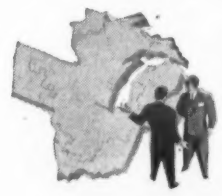
Practically every other family

One out of every three families in 756 cities and towns of 1000 or more population in this market reads the Tribune daily—on Sunday, almost every other family.

A powerhouse in building sales volume, the Tribune alone offers you a choice of monoroto, coloroto, comicolor, newsprint color and black-and-white.

Whether your factory production is large or small, big units or packaged goods, the Chicago market will reward your special attention. It is too rich in sales to leave wide open to competitors. Get set today for your full share of the first post-war selling. Assure yourself of continued dealer and consumer preference when buying drops off and competition multiplies.

For market facts and merchandising ideas, call a Tribune representative.



The Chicago Area: located at the heart of America; famous for its wealth and huge buying activity; big enough to absorb all that many a factory can make. Available for your study and use is a specific sales program based on the findings of an auto and household appliance investigation among consumers and dealers. To get these pertinent facts, address C. S. Benham, Manager, National Advertising, Chicago Tribune, Tribune Tower, Chicago 11, Illinois.

Chicago Tribune

THE WORLD'S GREATEST NEWSPAPER

March average net paid total circulation: Daily, over 955,000; Sunday, over 1,300,000.

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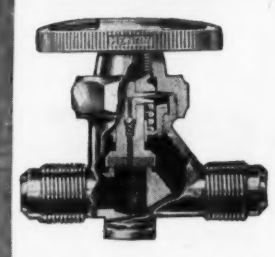
Balanced-Action Diaphragm Packless Valve

The only packless valve that gives you 24 important features of design, construction and operation—all described in catalog No. 96. It's yours for the asking.

LEAK PROOF • PORTS IN LINE • LONGER LIFE • OVAL HAND WHEEL

HENRY VALVE CO. 1019 N. SPAULDING AVE. CHICAGO

TYPE 625



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WHEN PEACE COMES

KOCH

WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE

NOW SOME SELF-CONTAINED REACH-IN REFRIGERATORS ARE AVAILABLE FOR THOSE WHO CAN QUALIFY . . . . . .

Write — Wire — Phone

KOCH REFRIGERATORS

NORTH KANSAS CITY . . . MO.

Fedders Co. Sales, Earnings Declined In 1944 Activity

BUFFALO—With the company's sales declining from $7,131,883 in 1943 to $5,671,674 in 1944, net income of the Fedders Mfg. Co., Inc., last year declined to $15,497, or 6 cents a share, from $113,282, or 49 cents a share, in 1943.

Report of the management said the termination in January, 1944, of the company's contract for the manufacture of machine gun belt links was "quite drastic," but that "fortunately management had foreseen the possibility of early termination and had developed several aircraft heat exchange products which have been well received by aircraft manufacturers. Substantial orders were obtained for the production of such products."

New aircraft heat exchange products—intercoolers, aftercoolers, oil temperature regulators, etc.—were claimed to have in large measure offset termination of ordnance production contracts.

The volume of electric water coolers for the United States Navy and Maritime Commission has substantially increased, it was stated.

It was further stated that the company's radiator division, which had a large volume of business making automobile radiators before the war, is increasing its output of radiators for military tanks and trucks.

Packaging Firms Preparing For Era Of 'Self-Service' Frozen Foods Retailing

NEW YORK CITY — The trend toward self-service in food stores will bring marked changes in the packaging and display of frozen foods, said M. C. Pollock, promotion manager of the Cellophane Division, E. I. du Pont de Nemours & Co., in a recent address before a luncheon meeting of the Eastern Frosted Foods Association at the Hotel Martinique.

Surveys indicate a desire on the part of self-service food stores to show as much frozen food as possible, he said. As a consequence, many ingenious retailers have altered present-type cabinets so that customers can both see the packages and serve themselves. Special units have been installed by numerous retailers, he said.

Manufacturers of refrigeration equipment for retail stores, recognizing the need for improved methods of displaying frozen foods, Mr. Pollock added, are developing cases that combine maximum self-service display value with the necessary degree of refrigeration to hold foods in the frozen state.

Packaging of frozen foods is also due for some radical changes, he predicted, to keep step with the trend toward open display. He said that the special conditions of self-service operations impose certain requirements on packaging and display to which the frozen food processor must gear his product in order to fit into this method of merchandising.

Fast turnover is one of the prime requirements of self-service, explained Mr. Pollock, adding that to accelerate fast turnover, the package must command attention, tell its own story, have convenience value, and offer the necessary degree of protection.

Testing and developing of improved methods of presenting frozen foods at the point of sale are being carried on at the present time, he said, and it may be expected that as the new self-service cabinets appear after the war, new streamlined frozen food packages will appear.

Plant Freezes Turkeys On Production Basis

SACRAMENTO, Calif. — Turkeys made ready for the oven and quick frozen for perfect preservation are being processed by a plant established in Sacramento last year by the Northwest Turkey Growers Association.

Turkeys are killed on the first floor of the plant by a separate company, and the best of the prime birds selected for this special processing. Drumstick tendons are then removed and the birds taken to the second floor by belt conveyor.

Here, in the eviscerating plant, they are carried past stations manned by 60 workers. The turkeys are cleaned, scrubbed inside and out, singed, the neck and head removed, the neck and edible organs wrapped in cellophane and placed inside. Federal inspection must be passed.

The birds finally are weighed, wrapped in cellophane, individually crated in cardboard, and sent to the freezing room. Here they are quick frozen at temperatures between 30 and 40° below zero, and placed in cold storage for shipment under dry ice or local delivery.

The plant went into operation during November and will run probably until the end of February each year, the normal turkey season there. Although there are two other similar plants in California, the article reports, neither of them are equipped for assembly line production.

Wartime's congested living conditions have had much to do with the plant's success, according to Herbert Byers, the general manager. The birds come to the housewife ready for the oven, requiring only thawing overnight. Stuffing is optional. The price differential averages 12 cents a pound more than regular turkeys as prepared and marketed over the counter, he said.

The plant's estimated output for this season is 35,00 turkeys. Sacramento was chosen by the association because of the large turkey farms and favorable freight rates.

Trayers Takes Post With Norge Division

EFFINGHAM, Ill. — William J. Trayers, formerly in charge of the enamel department of the Kalamazoo Stove Co., Kalamazoo, Mich., has joined the Norge division of Borg-Warner Corp. as foreman of the enamel department in the recently acquired Effingham range plant, it was announced by Chas. E. Smith, factory manager. Prior to his association with Kalamazoo Stove, he was with the Globe American Corp.

The SALES ADVANTAGES of FREEZ-ALL HOME FREEZERS

FREEZ-ALL LEADS THE NEW HOME FREEZER INDUSTRY

FREEZ-ALL has beauty—eye appeal—sales appeal beyond all expectations, but more than that, a long list of special features of design and construction that will give you important selling advantages. High in importance are (1) Drawer type construction for far greater convenience (2) Emergency hold-cold solution that will protect foods *for days* if the power fails. Let us send you full details about the market for home freezers and the complete list of FREEZ-ALL features. Write today. FREEZ-ALL dealers are now being franchised all over America.

FREEZ-ALL HOME FREEZERS

FREEZ-ALL DIVISION
Portable Elevator Mfg. Co.
Dept. T-9 Bloomington, Illinois

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

PURO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.

WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates American Machine Co. Beloit, Wis.

Lipman

AUTOMATIC REFRIGERATION

THE ANSWER TO EVERY SERVICE MAN'S PROBLEM OF MOISTURE IS ANSUL ICE-X

ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems ...The dependable liquid anti-freeze.

ORDER FROM YOUR JOBBER OR—

EXCLUSIVE NATIONAL DISTRIBUTOR
THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS

JOBBERS: WRITE FOR SPECIAL PROPOSITION!

Refrigeration May Go 'Underground' as Army Expands Cooled Mine Idea

RICHMOND, Va.—It looks as if the refrigeration industry is going to "dig in," what with cooling an abandoned mine in Atchison, Kan., and refrigerating tunnels in France. And now it is suggested that caves in Virginia be ventilated and cooled for Army use.

The War Department has just revealed that after the Allies landed on the Coast of Normandy last June the 4163 Quartermaster Refrigeration Company moved in and "occupied" three vast tunnels 50 ft. underground and opening on the face of a Normandy coastal cliff.

Installation of overhead ammonia pipes and a "Freon" cold-blowing apparatus converted the three tunnels into a 14° F. cold storage with a capacity of 3,000 tons of fresh meat. The caves had been constructed by the French back in 1928 to serve as ammunition dumps.

Each tunnel is about 250 ft. long and 30 ft. high with four lateral bays leading off on either side of each passage, reports the Army. Operating on a round-the-clock schedule, the Quartermasters receive the meat by truck directly from refrigerated vessels, stack it in the bays, and reissue it to big refrigerated vans for the trip inland.

To facilitate easy inventory and rapid loading (sometimes as many as 50 vans are lined up awaiting loading) only one type of meat is stacked in a bay. The types include pork, beef, poultry, frankfurters, bologna, etc.

All broken cases are checked for spoilage. This work is performed by an officer who was a veterinarian in civilian life, assisted by seven enlisted men who were butchers.

The example of this cold storage installation is cited by W. J. Stephenson, president of the National Speleological Society (scientific study of caves), in urging that the caves of Virginia be adapted for cold storage use.

"The Norman cave with a 3,000-ton capacity would be a mere niche in the Luray Caverns of Virginia," he declared.

Virginia caves, he pointed out, could provide ample space for many thousands of tons of Army supplies and equipment. Use of the caves, he said, would reduce the need for construction of new warehouses for Army stockpiles, but he acknowledged that other factors might make the use of some caves impractical.

As was reported in the March 12 issue of AIR CONDITIONING & REFRIGERATION NEWS, the federal government is proceeding with the installation of cooling equipment in Kerford Quarry out in Atchison, Kan. Work is about one-fifth completed, and plans call for a finished warehouse with from eight to nine acres of floor space. Present average temperature of 60° F. will be reduced to 30° F. when cooling equipment costing $1,378,000 is installed.

Third of Fruit and Vegetables Could Be Shipped by Air, Experts Believe

WASHINGTON, D. C.—Possibly a third of the nation's postwar shipments of fruits and vegetables could be handled by air transport, if the industry were properly organized, believe analysts of the Department of Agriculture.

The plan for making such shipments practical was presented in a recent issue of the War Food Administration's publication, *Marketing Activities*, by R. W. Hoecker of the Bureau of Agricultural Economics and R. K. Waldo and L. H. Brittin of the Edward S. Evans Transportation Research Foundation.

Essence of the plan is the use of surplus government transport planes piloted by former war fliers to carry fruits and vegetables from the South and West to industrial areas in the North and East and return with a load of industrial products.

It is estimated that after the war the government will have on hand some 15,000 transport planes which could be sold to private operators on easy purchasing arrangements. Reconversion costs would be a small factor, these experts believe.

A recent study on two-way shipments of strawberries and tomatoes from Florida producing areas to Detroit showed an operating cost of 10 cents a mile, but another study with a larger plane carrying lettuce revealed a cost of 6.55 cents a mile.

To be practical, such air transportation schedules would require a minimum distance of 750 miles. Studies indicate that air freight cannot compete with other forms of freight if distances are less than 1,000 to 1,500 miles, according to this report.

The best such transport line would terminate in a metropolitan industrial area covering some 300 miles. Transports would leave with fruit or vegetables in time to arrive at their Eastern or Northern terminals for the early morning markets and return laden with industrial cargo.

The study on lettuce indicated that Chicago, Cleveland, and Detroit could probably provide only enough return industrial shipments for one plane daily, according to the experts.

Refrigeration Engineer

Must have technical and practical knowledge of refrigeration and manufacturing. Plant located in Ohio. Address all applications to

Box 1712
Air Conditioning & Refrigeration News

MASTERCRAFT
ADJUSTABLE
REFRIGERATOR PAD

NATIONALLY ENDORSED

Pad is adjustable to all makes and sizes of refrigerator cabinets; thoroughly protects finish of cabinet from scratches and mars during moving; easily and quickly put on or off; sturdy, lasting construction; easily pays for itself in a short time. Price $11.75 each.

Attractive lettering of your name on pad at $2.00 each extra.

For carrying your refrigerator more safely and easily, use the Mastercraft Adjustable Carrying Harness which is a separate unit from the pad and priced at $6.50 each.

Write for complete folder and prices on pads for refrigerators, washers, ironers, ranges, radios; also furniture pads and protective covers. . . . All prices subject to change without notice.

BEARSE MANUFACTURING CO.
Incorporated 1921
3815-3825 Cortland St., Chicago 47, Illinois

Profit planning is easy with these new

Weber ROLL-A-DOOR

Frosted Food and Ice Cream Cabinets

Roll-A-Door Frosted Food Cabinet Model No. 200 with Mirrored Super Structure.

Roll-A-Door Ice Cream Cabinet Model No. 200

THE Sensation OF THE INDUSTRY

PLAN NOW to Sell Weber Time-Tested Equipment

Indicative of the leadership of Weber store equipment, Roll-A-Door Frosted Food and Ice Cream Cabinets are doing an outstanding job of merchandising. *Soon*, these time proven, nationally accepted cabinets with new design and improved engineering developments will be ready to help you build a profitable postwar future. Other Weber equipment including commercial refrigerator display cases, reach-in cabinets, walk-in coolers, soda fountain equipment and *New* Roll-A-Door home freezers will make the Weber line the most complete and fastest selling line in America.

Plan now to sell the Weber line instead of selling against it. Mail this coupon today for full information.

WEBER SHOWCASE & FIXTURE COMPANY
5700 Avalon Boulevard
Los Angeles, California
Dept. "C"

Gentlemen:
Kindly send me complete data on the Weber Franchise

for the _____ Territory

Name _____

Company _____

Position _____

Address _____

WEBER SHOWCASE & FIXTURE CO. Inc.
5700 Avalon Blvd., Los Angeles, Calif.
LOS ANGELES, WHITTIER, EL PASO

EST. 1898

Province of Alberta Has 33 Locker Plants

CALGARY, Alberta, Canada—First annual convention of the Alberta Cold Storage Locker Plants Association, which came into being three years ago, was held in Calgary at the Palliser Hotel recently, attended by 175 operators and representatives from outside the province.

D. H. McCallum, Alberta dairy inspector, traced the growth of the cold storage locker industry in the province. He noted that the first complete service locker plant to be established in Alberta was built in Strathmore, beginning operations in 1939.

Within a short time other plants were established, mainly in the southern part of the province. In July, 1944, there were 33 plants in operation with a total of 8,768 lockers. During the past year 13 new plants have been put in operation, and 24 other applications have been approved and plants are being established. In addition there are 19 applications on which a decision is pending.

Another speaker was Dr. J. H. L. Truscott, chief of horticultural research at Ontario Agricultural College, Guelph, Ontario, who told operators they should not fear competition from home freezer units, but should regard these as a way of helping to introduce frozen foods to new consumers.

Walter Slagle Partner In Denver Concern

DENVER—B. Walter Slagle has become an active partner and owner with O. F. Achtenhagen in the Radio & Appliance Distributing Co. of Denver, a long-established Philco distributor serving the Colorado area, it was announced recently.

For the past two and a half years, Mr. Slagle has been the civilian adviser to General Frank, commanding general of the Air Force Command, Patterson Field, Dayton, Ohio.

Prior to the war, Mr. Slagle served in various executive capacities for the Ford Motor Co.

Rasmussen Sees Sales Jobs For Over 5 Million

CINCINNATI — Prediction that five and one-half million salesmen will be needed in America, when peace comes, if the nation is to have an annual income that will provide 55 to 60 million jobs, was made by James H. Rasmussen, general sales manager, manufacturing division, The Crosley Corp., in a talk before the Cincinnati Sales Executives' Council.

"The U. S. Bureau of the Census tells us that there were approximately 2,900,000 salesmen in this country in 1940, just before the war, and that our national income was 77½ billion dollars in the same year," Mr. Rasmussen said.

ESTIMATING THE NEED

"If, as has been estimated, the nation needs an annual income of 140 to 155 billion dollars to insure jobs for somewhere between 55 and 60 million workers, then we will need somewhere between 5,200,000 and 5,800,000 salesmen after the war."

Mr. Rasmussen challenged the sales Executive Council, and the National Federation of Sales Executives, with which it is affiliated, by declaring that it could render invaluable service to the industries and businesses that they represent, and to the nation generally, by undertaking a two-fold program: first, to recruit sales talent; and, second, to help teach these recruits the fundamentals of salesmanship.

"Let's not forget that the bulk of the millions of the new salesmen who will be needed must be enlisted from the ranks of ex-war workers, or ex-service men, the larger majority of whom have learned to work with their hands," Mr. Rasmussen asserted.

MUST 'SELL' SELLING

"Many of them must be sold on the advantages of the selling profession. They must be encouraged to develop talents which they did not know existed, or which have lain dormant for several years."

Mr. Rasmussen declared that the training of these potential salespeople is a tremendously important task and worthy of the best efforts of the sales executives.

"I don't mean that you should undertake to give them specialized training—such as the type of training required to sell silk hose or automobiles or soap or radios," he said. "It would be their eventual employer's responsibility to give them the specialized training they require."

"We at Crosley," Mr. Rasmussen continued, "have pondered this problem and have done something about it. We have combed our greatly enlarged organization for likely looking sales talent. We have started classes to teach the fundamentals of salesmanship and have encouraged these people to attend these classes."

Georgia Manufacturer To Handle Appliances

MACON, Ga.—MacMillan Electric Mold Co., of this city, manufacturers of electric recapping and vulcanizing molds and distributors for recapping supplies and other equipment, recently added a line of electric refrigeration and other appliances for commercial and household use.

Ray T. Ringler has been named sales manager of the new department, which will distribute a wide range of products, including Amana home freezers, Amana combination freezer and walk-in, Victor farm freezers, Dexter washing machines and ironers, Haag washing machines and ironers, Garod radios and phonographs, Setchell-Carlson radios, White electric water heaters, Starline electric water heaters, electric water coolers, Sampson electric irons and electric fans, Kitchen-Aid mixers, Everhot electric roasters, White Cross small appliances, Buffalo Forge industrial fans, Victor tubular coolers, Victor milk coolers, and Naxon portable washers.

It was announced that the company had several dealer territories available in Georgia and Alabama.

Moved Up To New Promotion Jobs

C. S. TRIGG

PAUL J. BARNABY

* * *

Trigg and Barnaby Get New Frigidaire Posts

DAYTON, Ohio — Two veteran Frigidaire employes, C. S. Trigg and Paul J. Barnaby, have been appointed to key positions in the sales promotion department.

Mr. Trigg, formerly in charge of appliance training is now manager of appliance product promotion and Mr. Barnaby, formerly of the commercial training department is manager of the commercial product promotion.

C. S. Trigg has been with Frigidaire 15 years and has a diversified background in engineering, service, promotional, and training fields. Paul J. Barnaby brings to his new post 17 years of Frigidaire experience in the field and with the factory sales and training divisions.

Utility Appliance Names Two Key Distributors

LOS ANGELES—Utility Appliance Corp., manufacturer of heating, cooling, and air-moving equipment and household appliances, announces the appointment of Higgins Industries, Inc., New Orleans, as distributor of the complete Utility line for Louisiana, south central Mississippi and southern Alabama.

Higgins, well-known builder of P-T boats, has an appliance division.

It has also been announced that the F. C. Stearns Co., Hot Springs National Park, Ark., one of the country's pioneer hardware wholesalers, will handle distribution of Utility products in the state of Arkansas.

Sweet Dreams

That will COME TRUE

FOR FARM FAMILIES EVERYWHERE

BEN-HUR

FARM AND HOME FREEZERS

FORWARD-LOOKING families are planning post-war budgets that will include a Ben-Hur Farm & Home Freezer for freezing and storing all types of food products. The whole family looks forward to the pleasure of enjoying home-grown vegetables, fruits, meat and poultry months after they have been frozen and stored . . . besides banking substantial savings in food, and avoiding unnecessary shopping trips.

YOU can make these post-war dreams come true for your customers — and cash in on a tremendous future market — by featuring the BEN-HUR Farm & Home Freezer when production is permitted.

GET ON OUR LIST for full information and sales facts — to be sent you as soon as this data becomes available.

ARMY E NAVY

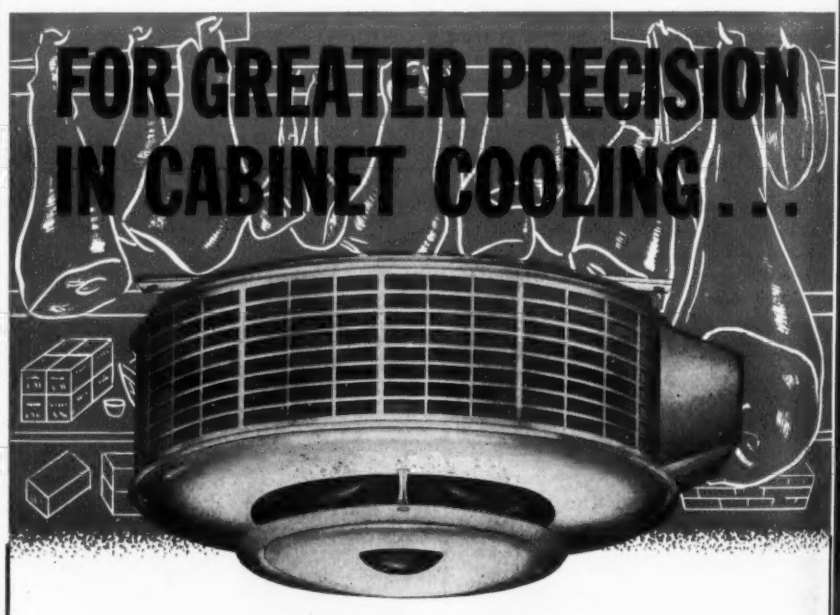
War Bonds NOW will bring V-Day Sooner!

BEN-HUR MANUFACTURING CO.

634 EAST KEEFE AVENUE • MILWAUKEE 12, WIS.

BEN-HUR FARM & HOME FREEZERS

FOR GREATER PRECISION IN CABINET COOLING . . .



New "M&E" UNIT COOLER

With Controlled-Air Circulation

A complete line of modern unit coolers for above-zero application in every type and size of commercial cabinet.

Advance Inquiries Invited from Cabinet Manufacturers, Distributing Organizations

MERCHANT & EVANS CO.

2035 WASHINGTON AVENUE

PHILADELPHIA 46, PA.

Manufacturers of Cooling Units and Fin-Type Coil Products.

M&E EST. 1866

A PIONEER NAME IN REFRIGERATION

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

the thinking of all of us might assume a little clearer pattern."

E. R. LEGG,
Ass't General Sales Manager,
Nash-Kelvinator Corp.

". . . a challenge to the industry to base its formula for success on the principles of good common sense and Yankee ingenuity . . . page after page of meaty information."

L. H. D. BAKER,
Vice President, Appliance Div.,
Admiral Corp.

"You have a unique talent for writing in terms that are understood by salesmen and sales executives—that stimulate discussion among them and lead to concrete planning and effective action. Your book will serve useful purposes . . . power to your trenchant pen!"

LOUIS RUTHENBURG,
President, Servel, Inc.

". . . stimulating and informative . . . everyone whose future is tied to the appliance and/or electric refrigeration business should consider it a 'must' in their reading for postwar guidance."

W. E. LANDMESSER,
Manager, Commercial Dept.,
York Corp.

". . . most certainly brings one up-to-date on the present status of major appliances and radio . . . stimulates one's thinking and planning for the future. I think it should not only be read, but studied by every distributor and sales manager."

J. L. BUSEY,
Vice President,
General Electric Co.

". . . jammed full of helpful and vital facts and suggestions that should be invaluable to everyone who is placing his future in the refrigeration industry."

E. A. TERHUNE,
Vice President,
O. D. Jennings & Co.

". . . should be required reading for anyone who hopes to be in business after the war."

N. C. COOPER,
E. I. du Pont de Nemours & Co.

"It's a masterpiece. I am sending copies to my sons . . . in the Navy."

CHARLES J. GIBSON,
President,
Gibson Refrigerator Co.

". . . meaty, earthy, and practical."

L. W. CLIFFORD,
Westinghouse Electric & Mfg. Co

". . . real contribution to the refrigeration industry."

A. B. NEWTON,
Chrysler Corp., Airtemp Div.

". . . a sincere effort to make a contribution, particularly to the distribution phase of the appliance industry."

HOWARD E. BLOOD,
President,
Norge Div., Borg-Warner Corp.

"I know of no one better qualified to handle the subject."

LEWIS M. CROSLEY,
Executive Vice President,
The Crosley Corp.

"I heartily agree with some of the deductions you have drawn."

J. H. GANZER,
Vice President,
The Coolerator Co.

". . . very interesting . . . am going to benefit a great deal as time goes on from your good foresight and understanding."

R. E. HERRICK,
President,
Tecumseh Products Co.

". . . detailed knowledge, presented factually . . . material of considerable value in my daily business routine . . . a worthwhile contribution to the industry."

CHESTER E. BORDEN,
A. E. Borden Co.

On the Job

Herewith we present the most interesting letter of the week from a soldier-subscriber:

2938 Engr. Sv. Det. (Refrig.)
APO 322, San Francisco, Calif.

Editor:

I worked for a time in the engineering department of the York Corp. (in my home town), not in any major capacity, however. And graduated from Penn State as a mechanical engineer. In the Army I was first with an aviation engineer battalion, and then to the 2938th as C.O.

We are a chummy outfit, the 2938th, all of us. A separate detachment, on our own, independent, and at present maintaining refrigeration at two bases about a hundred miles apart.

Organizational equipment for all outfits—portable boxes from 10 cu. ft. to 4,300 cu. ft., ice cream freezers, X-ray machines, photo developers, household units; and merchant ships of all nations.

Then, too, we operate two Frick 15-ton ice plants. So you can see we are quite busy.

We are thinking of perhaps doing a writeup on the operations of such a detachment, showing how it goes into a newly established base at about D + 10, sets up its organization and maintains operations; its equipment and the calibre of men in the unit—all written to show a service mechanic back home how the Army does it, a perspective from his point of view.

The main difficulty is our finding a camera and a photographer of professional quality to make the pictures we require for illustrations: photos of the men leaving on a C-47 plane for a trip into the bush country, loading their service tools aboard a small cabin cruiser to service a ship, pictures of the shop and a mechanic with his jeep and equipment about to embark on a service run, and photos of freak installations made up by G.I.'s with a bit of Yankee ingenuity and assorted salvaged tubing and air(!) compressors.

LT. DON DICKINSON

National Refrigeration Supply Jobbers Association — Member

Local Promotion

Manufacturers know that finding the prospect and acquainting him with their products must precede any sale. NRSJA jobbers maintain complete mailing lists of buyers active in the territories, contacting these buyers regularly with personal calls and mailing pieces. They know the trade. The manufacturers NRSJA members represent obtain aggressive cultivation of each local territory.

NATIONAL REFRIGERATION SUPPLY JOBBERS ASSOCIATION
Dependable Distribution
Paramount Building - - Cincinnati, Ohio

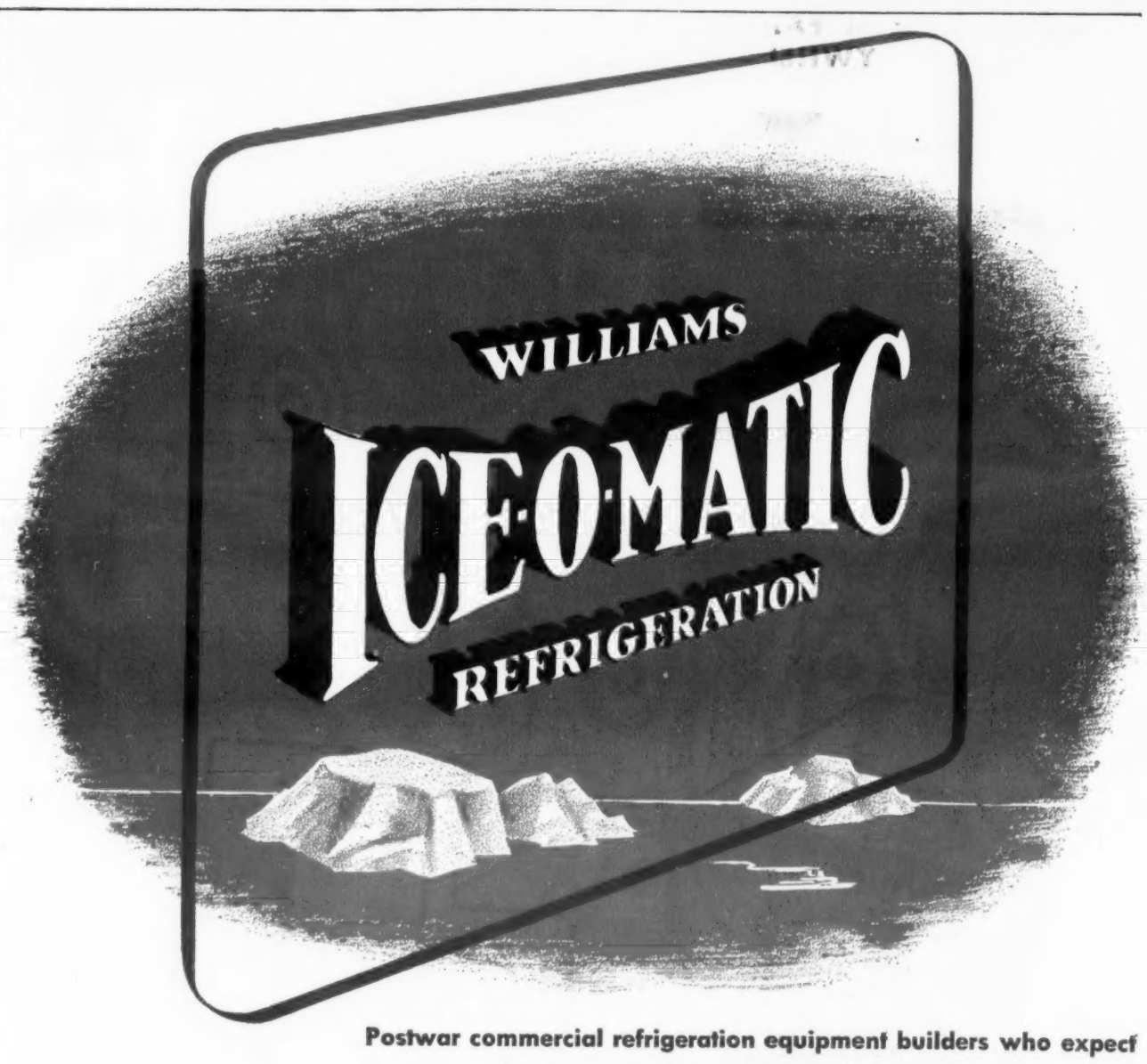
REACH-IN REFRIGERATORS
(20 TO 70 CUBIC FEET)
AVAILABLE FOR PROMPT SHIPMENT
WITH OR WITHOUT CONDENSING UNITS
(PRIORITY REQUIRED)
FOGEL REFRIGERATOR COMPANY
5400 Eadom St., Philadelphia 37, Pa. Since 1899

PUFFER-HUBBARD
A Case of Good Refrigeration Engineering

Your inquiry is invited now. Ask us about available equipment.

- Practically every type of commercial refrigeration cabinet including Refrigerated Display Cases—Beverage Coolers—Walk-in Coolers—and Reach-In Cabinets . . . each bearing the mark of a good case.
- All porcelain exteriors and interiors. Equipped with patented and exclusive Grad-U-Matic Air Conditioning Systems.

PUFFER-HUBBARD MFG. CO.
★ *The Mark of a Good Case*
GRAND HAVEN, MICHIGAN, EST. 1898



Postwar commercial refrigeration equipment builders who expect to grow and prosper *must* have a *compressor unit* that is tops in efficiency, economy, and trouble-free operation. If you expect to *buy* your unit, investigate Williams ICE-O-MATIC, featuring the famous, *exclusive* oil rectifier and positive pressure-type lubrication.

As soon as conditions permit, ICE-O-MATIC units will be available in ¼ to 5 h.p. capacities to meet all temperature requirements. War-expanded skill and facilities will make them even finer than those now serving so dependably in many fields. For details, write *now* to WILLIAMS OIL-O-MATIC HEATING CORPORATION, Bloomington, Illinois.

For continued excellence in producing tough-to-build war equipment, Williams employees have *four times* received the Army-Navy Award, as well as the USAAF "Approved Quality Control Rating."

THEY SAW WHAT THEY WANTED

Uncle Sam's war technicians, looking for proven mass-precision facilities, visited Williams. They saw what they wanted in this Ice-O-Matic unit that hasn't stopped running for 17 years!

Natkin Co. Asks Manufacturer-Distributor Committee End 'Chaos' in Air Conditioning

Say Firms Brought Into Field Under False Pretenses

KANSAS CITY, Mo. — Declaring that "considerable chaos" would be likely "if the practices in the air conditioning industry which were prevalent before the war continue," Natkin & Co., one of the oldest and largest distributor-contractor firms in the field, has written a circular letter to a number of manufacturers asking for action by a joint manufacturer-distributor committee to eliminate such practices and to appraise those who would enter the field of the nature of the business.

In explanation of the reason for approaching this subject, Emil Haas, Jr., partner in the firm of Natkin & Co., declares:

"During the course of the past 10 years we have seen so many people enter the air conditioning business and after a reasonably short time either liquidate or become insolvent due to the fact that one way or another they were not qualified to conduct a business of this nature.

"While there have been many reasons for the high mortality rate in our industry, we believe that one of the most glaring causes has been the attitude of many of the leading manufacturers. Time and again we have seen appointments made of organizations that had been in totally foreign lines and who had entered the air conditioning field because the picture had been so rosily painted and they had not been fully informed as to what qualifications were necessary in order to operate successfully.

"Particularly, we do not believe that these people have been advised as to the engineering skill required, the fact that this is essentially a contracting type of business, that adequate service must be maintained. A great many of these people might not have taken steps had they realized all of the ramifications. Others might still have entered the field but would have taken the proper steps to qualify themselves and would have remained successful operators and a credit to the industry.

"While air conditioning generally has made great strides in the past there have been a great many installations which have been unsuccessful and which have reacted unfavorably to all of us who are trying to maintain a high standard and build up goodwill.

"We cannot help but feel that a great deal of good could result from some type of a joint organization which would have the benefit of past experience in all phases of our work. The information they could present could be made available to all of those who are in the business now, as well as to the great many who plan to enter the field after the war."

Text of the Letter

Following is the text of the letter to manufacturers:

Realizing your vital interest in all matters pertaining to the air conditioning and refrigeration industry the writer would like to present to you herein several thoughts which have occurred to us during the past few years and which might tend to improve general business conditions in this field. These ideas are the result of a study of our own operation as well as that of many other concerns.

No doubt you are aware that during the 10 years previous to the war the mortality rate of businesses engaged in air conditioning and refrigeration work has been very high. Not only have many firms become insolvent but a great many financially responsible organizations have entered the business full of enthusiasm and after a few years of operation they have liquidated their air conditioning department with unpleasant memories.

We believe that we can safely say that the majority of these unfortunate experiences have been brought about in a large degree by the enthusiastic picture which has been presented to these people by the sales organizations of the manufacturers and further by advertising which has given the impression that this business approaches Utopia.

Justly, manufacturers have endeavored to secure representation and to sell their product by appointing distributors and representatives. Unfortunately they have not, in many cases, taken into consideration the qualifications of the individuals with whom they have dealt.

In some cases, we may even say that they may have misrepresented the possibility of making a profit in this business. In other instances they have been guilty of selecting people who are not qualified.

The manufacturers have not always had the proper type of field representation to intelligently provide their outlets with the necessary information for successfully conducting business of this nature.

In many instances the firms might have the necessary engineering and mechanical skill required, but lack the business qualifications to insure success. This is particularly true in that a great many firms have no real conception of their cost or what mark-ups they should use in ascertaining a satisfactory selling price.

We know that you are familiar with these observations and that it is the intention of the manufacturers to do everything possible to insure a profitable and healthy industry. It is, of course, fundamental, that your business cannot be successful if the people who handle your product are unable to operate profitably.

Of course, you have your Association of manufacturers which has done much fine work. However, we believe you could be criticized in that you are endeavoring to improve conditions generally without properly cooperating with your distributors or outlets. We are, therefore, writing this letter, not in a spirit of criticism, but with the hope that friendly cooperation may be achieved between all the manufacturers and their distributors or contractors.

It would be our suggestion that some type of organization or possibly a committee to operate as an adjunct of your Manufacturers' Association, could be appointed, including men from a number of manufacturing organizations and a number of eminently qualified contractors or distributors from various sections of the country.

These people, working together, could familiarize each other with the particular problems which each group encounters and we believe work out some type of program which would be of inestimable value to the entire industry.

Please bear in mind that this letter is not directed at your company but rather at the industry as a whole and the purpose which we have in mind is to provide some type of educational program which would be of assistance to all.

In the immediate years to come there are bound to be a great many firms, already in business, who will enter the air conditioning field both as manufacturers and installers. Furthermore, there are many individuals who will be returning from the Armed Services who will desire to enter the air conditioning business as distributors.

We can readily forsee considerable chaos and a great deal of misfortune to numbers of these people if the practices which were prevalent before the war continue. It is our hope that some such organization as we have suggested above could be formed immediately and with this thought in mind we are addressing ourselves to you.

We are also today sending similar letters to several other of the large manufacturers. Understand that it is not our purpose to arrange any kind of an organization which would establish prices or protection to a favorite few, but only to acquaint all phases of our industry with our mutual problems in an honest endeavor to build a strong and healthy business condition.

New Buffalo Supply Firm

BUFFALO—A certificate of partnership has been filed here for the Refrigeration Supply Co., 77 Broadway, by Max M. Rosen and Ira Rosen.

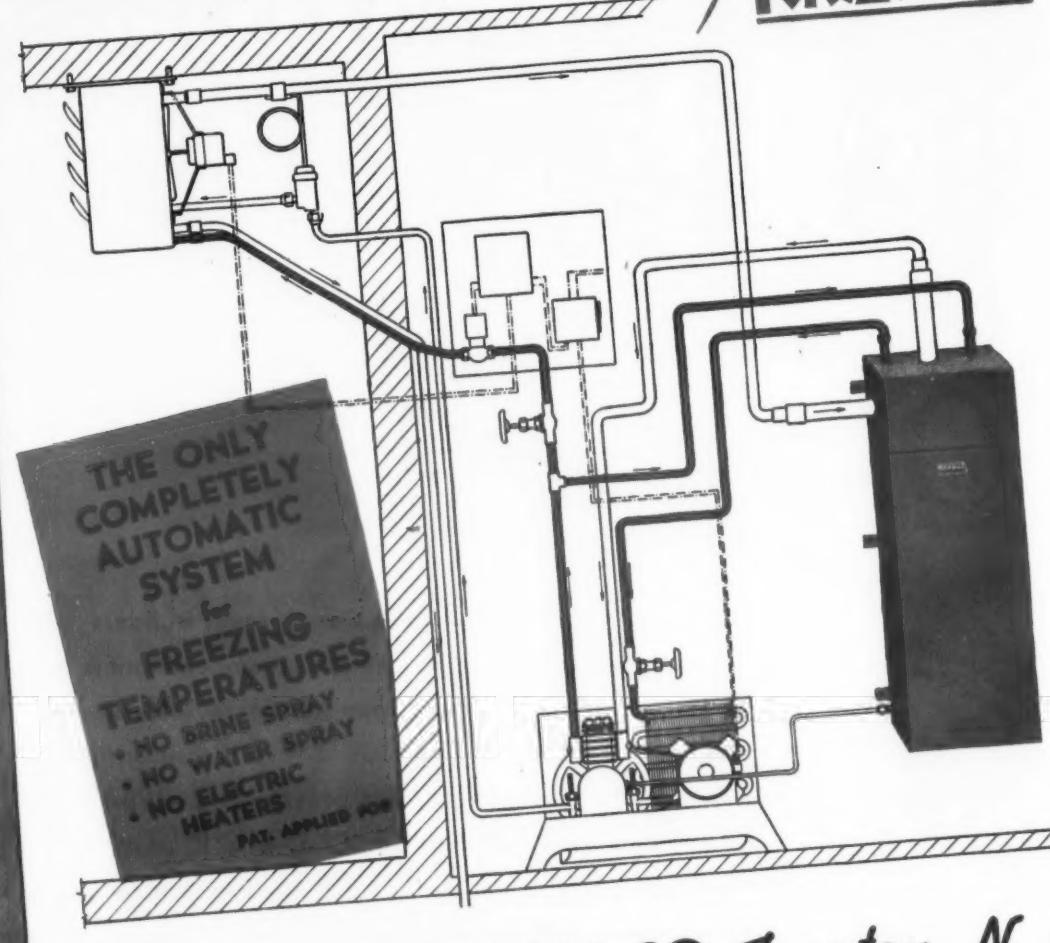
Graham Heads Trane Office

GREENSBORO, N. C.—William D. Graham is the new manager of the Greensboro branch office of The Trane Co. This office is located at 504 Jefferson Standard Bldg. here.

DISTRIBUTION AVAILABLE

Large East Coast Jobber wants line of fixtures—walk-in boxes, reach-in cabinets, cases, freezers, etc., for resale to independent service men. Box 1713 Air Conditioning & Refrigeration News.

THERMOBANK by KRAMER


THE ONLY COMPLETELY AUTOMATIC SYSTEM for FREEZING TEMPERATURES
• NO BRINE SPRAY
• NO WATER SPRAY
• NO ELECTRIC HEATERS
PAT. APPLIED FOR

KRAMER-TRENTON CO. *Trenton, N. J.*

Write for Bulletin TV-345 N2

CHICAGO SEALS GO ON THE SHAFT WITH EASE AND SPEED AND CUT DOWN "CALL BACKS." THAT'S HOW THEY PUT MORE PROFIT IN EVERY JOB

MODERN DESIGN

Sold By Jobbers

CHICAGO SEAL CO. 20 N. WACKER DR., CHICAGO 6, ILL.

OPA Gives Details of Reconversion Pricing; To Guard Against Trend To 'Deluxe' Models

WASHINGTON, D. C.—Details of the reconversion pricing program under which OPA will attempt to hold most peacetime goods returning to the market to 1942 retail prices were outlined late last week by Price Administrator Chester Bowles.

One element of the plan that goes a little beyond mere pricing policy is the OPA's determination to use its power to maintain production of lower priced lines.

"It is a basic policy of the government's stabilization program that, as consumer durable goods and building materials of importance to consumers return to the market, the cost of living should not be raised by a shift in production patterns from lower priced to higher priced models," said Mr. Bowles.

"To work out means of attaining this objective the WPB and OPA will shortly consult with producers of refrigerators, washing machines, vacuum cleaners, radios, and other electrical appliances. In the case of other products of lesser importance WPB and OPA will watch developments to detect and prevent any significant shift to higher priced lines or models."

Four Pricing Problems

The manufacturer turning from the production of war materials to peacetime products may face one or more of the following four pricing problems:

1. How to price the products he made before the war and which other manufacturers have continued to produce throughout the war;
2. How to price the products that he made before the war, but which have been largely or entirely out of production during the war;
3. How to price new models of the same products he was making when he turned to war work;
4. How to price products that he had not been making before the war.

Where the manufacturer returns to the production of the same models that he made before turning to war work, price ceilings generally exist—usually at the March, 1942, level. He can use these same ceilings.

—But, suppose that a company seeks an increase in the level of its ceiling prices.

Formula For Increases

OPA will survey the industry's costs and prices in the last period of normal production—usually 1941 or some part of it. These costs will be adjusted upward for two factors—first, lawful increases in materials and parts prices, and second, lawful increases up to this time in basic wage-rate schedules of factory workers.

To the 1941 costs so adjusted, OPA will add in place of the 1941 profit margins "the more nearly representative peacetime margin received in 1936-1939."

The excess of the resulting figure over 1941 prices will be expressed in terms of an industry-wide "increase factor." This will be a percentage figure by which any manufacturer in the industry may increase his 1941 price or prices. If the price as raised by the increase factor is higher, he can use that figure; but he can use the 1942 ceiling price if that should by any chance be the higher one.

How Price Is To Be Raised

Here is a specific example of how this "increase factor" might work out—

A manufacturer of a certain product in 1941 had unit wage costs of 33 cents, material costs of 30 cents, and other costs adding up to 27 cents, making his total product cost 90 cents per unit. His selling price was $1.00, so that his profit was 10 cents per unit.

At the present time we'll say his wage costs are up 20% to 39.6 cents, and his material costs up 10% to 33 cents, while the total other costs continue to remain at 27 cents. Thus, his current costs for a unit that cost him 90 cents to make in 1941, are 99.6 cents.

Then OPA finds that the industry's 1935-1939 average profit on each unit was 5 cents. OPA would allow the manufacturer to add 5 cents to his current production cost of 99.6 cents, making his ceiling price come to about $1.05.

Method For New Models

When the manufacturer is coming out with new models, he will have to calculate ceilings. He will do this according to pricing methods that will be stated in detail in amendments to OPA regulations "to be issued shortly." These pricing methods, it was stated, will be somewhat similar to those now in use in Maximum Price Regulation 188, which provides, in general, methods for setting prices in line with existing ceilings.

Prior approval of these prices by OPA will not be required, but the ceiling price for new models calculated in this way must be filed with OPA a short time before the manufacturer begins to sell them.

If the manufacturer in an industry for which an "increase factor" is announced is coming out with new models, he will first use the method described for increasing his price to adjust his ceiling prices for the model he last sold. He will then use the adjusted old-model prices as a basis for arriving at ceiling prices for the new models in the way that OPA will prescribe for new models.

In pricing a product that the seller will be making for the first time, the manufacturer must apply to OPA for ceiling prices in line with those of his competitors for the most nearly comparable products. Applications by small manufacturers will be handled in OPA field offices to facilitate quick decisions.

Chicago Fixture Dealers Form New Organization

CHICAGO—Dealers in refrigerated store fixtures in this area have formed under the sponsorship of the Commercial Refrigerator Manufacturers Association, a local organization to be known as the Commercial Refrigeration Distributors Association of Chicago.

This new group plans to hold luncheon meetings on a monthly basis, at which problems of mutual interest and concern may be discussed, and steps taken to elevate the ethical practices of the business.

Activities of the group are being directed by W. H. Sudekum of Hussmann Refrigeration, Inc., as secretary. Other members are Perry Joy, Super-Cold Midwest Co.; Irving Shell, Lee-Shell Co.; Fred Avery, Universal Store Fixture Co.; Frank Murphy, McCray Refrigerator Co.; Ben Marcus, General Utilities Distributors; and H. E. Goldman, Goldman Refrigerator Sales Co.

NO

WE do not manufacture complete refrigeration units, such as . . . Frozen Food Cabinets, Farm Freezers, Ice Cream Cabinets, Milk Coolers, Bottle Coolers, Walk-In and Reach-In Refrigerators, etc.

BUT

WE do supply manufacturers of the above complete refrigeration units, and many others with Dole Vacuum Cold Plates.

We do not compete with our customers.

Dole smooth surface plates assure maximum refrigerating efficiency and lasting satisfaction.

Ask us to discuss them with you!

DOLE *Largest Manufacturers of Plate Type Evaporators*

REFRIGERATING COMPANY

5910 North Pulaski Road, Chicago 30, Illinois

New York Branch: 103 Park Avenue, New York 17, N. Y.

The Symbol of Perfection

IN LOW TEMPERATURE APPLIANCES AND EQUIPMENT

★ PREFABRICATED FROZEN FOOD CENTERS

★ PREFABRICATED COMMUNITY LOCKER PLANTS

REFRIGERATION CORPORATION FRIGID FREEZE PRODUCTS of AMERICA TRADE MARK REG. U. S. PAT. OFF.

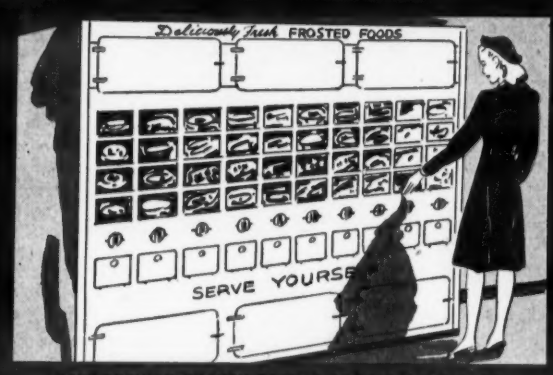
★ COMMERCIAL FROZEN FOOD CABINETS

★ ICE CREAM CABINETS

★ HOME AND FARM FREEZERS

HOME AND FARM FREEZERS

Magic Vaults for the American Kitchen, destined to introduce a new era of gracious living.



SELF SERVICE FROZEN FOOD DISPENSING CABINETS

Self contained and automatic . . . Takes frozen foods out of hiding and puts them on display.

SELF SERVICE-AUTOMATIC-FROZEN FOOD CENTERS

Here is a preview of the streamlined, prefabricated, completely equipped store of tomorrow.

● Today, U. S. war production precision-standards are sharpening our craftsmanship so that tomorrow, when the bigger job is finished, FRIGID-FREEZE Home and Farm Freezers, an important and complete line of magic vaults for the American kitchen, will contribute to your success in the household appliance field.

KEY RETAILERS . . . WRITE US NOW

for information that may enable you to obtain the exclusive, profitable, post-war FRIGID-FREEZE FRANCHISE

PIONEERS IN LOW TEMPERATURE • DESIGNING • ENGINEERING • MANUFACTURING • CONSTRUCTION

REFRIGERATION CORPORATION of AMERICA

241-245 West 64th Street, New York 23, N. Y. · Cable Address: "REFCAM"

Sales Office and Showroom: 225 West 57th Street, N. Y. C. (19)

They'll Do It Every Time . . . . By Jimmy Hatlo

ALL READY TO START WORK, EH, M'BOY? O.K.-TAKE YOUR APPLICATION TO THE RECORD DEPARTMENT--YOU'VE GOT TO BE PHOTOGRAPHED AND FINGERPRINTED. AND THEY'LL ARRANGE TO HAVE YOU BONDED. I'LL KEEP YOUR SIX LETTERS OF RECOMMENDATION HERE. WE DISCUSSED THE SALARY, DID WE NOT? $72 PER MONTH TO START...?
"AROUND THIS JOINT, THE MEANER THE JOB IS, THE MORE TROUBLE IT IS TO GET IT. BIG DOME MUST THINK IT'S STILL 1933!
$72 A MONTH-- THAT'S A FAST WAY OF MAKING $16.50 A WEEK SOUND LIKE A LOT OF DOUGH. BIG-DOME'S A CON MAN--
THEY BOND AND FINGER-PRINT THE WRONG GUYS. IF THERE'S ANYTHING THAT WASN'T NAILED DOWN, BIG-DOME FURNISHED HIS HOUSE WITH IT--
YEAH--I NEVER HEARD OF AN OFFICE BOY ABSCONDING WITH THE FIRM'S DOUGH YET--
B.B.BIGDOME
THEY'RE STARVING FOR HELP--BUT YOU WOULDN'T THINK SO FROM THE ACT THEY PUT ON
THANX TO ALVIN MOREY, CHICAGO, ILL.
8-16
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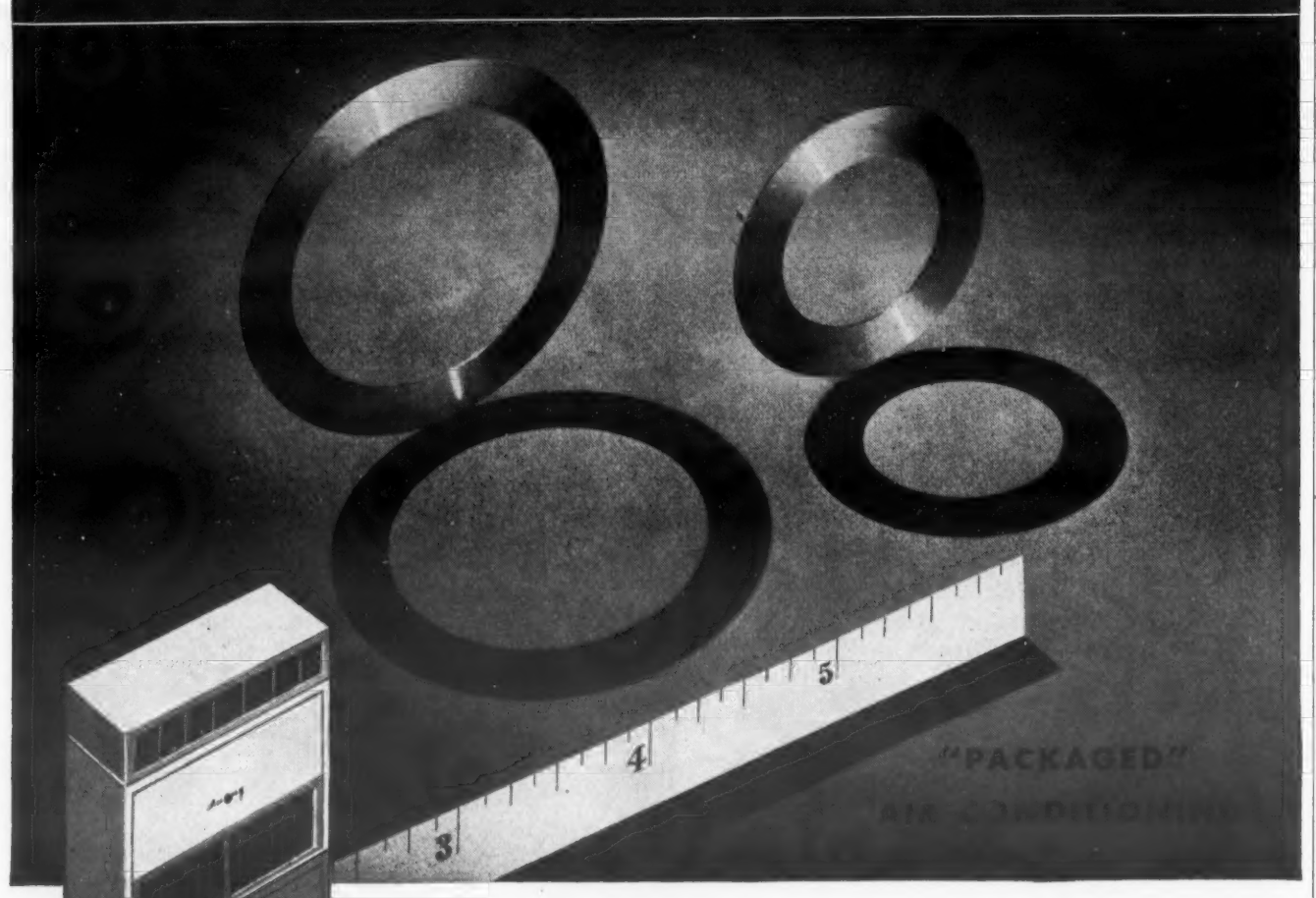
SUPPORT THE 7th WAR LOAN . . . BUY AND KEEP . . . WAR BONDS

CHRYSLER AIRTEMP



Compressor Valves Designed for Lasting Life

Special ring-plate, non-flexing valves are an important feature of Chrysler Airtemp hermetically sealed compressors. Made of finest saw steel, these sturdy valves are pressure lubricated and operate on a "superfinished" seat. Valves that "STAND UP" are another reason why Chrysler Airtemp radial design compressors—with air, dirt, and moisture sealed out—give long, quiet, trouble-free service.

"Packaged" air conditioning units, pioneered by Chrysler Airtemp, are easy to install and economical to operate. When you have temperature-humidity control problems, turn to Chrysler Airtemp. There is a unit and capacity range ideal for practically every air conditioning, commercial or industrial refrigeration requirement. • Airtemp Division of Chrysler Corporation, Dayton 1, Ohio.

Buy More War Bonds! You'll enjoy "Shower of Stars" Thursdays, CBS., 9 p. m. E. W. T.

HEATING • COOLING • REFRIGERATION

Trade Mark registered U. S. Patent Office; Est. 1926

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AIR CONDITIONING AND REFRIGERATION News

BUSINESS NEWS PUBLISHING COMPANY • 5229 CASS AVENUE, DETROIT 2, MICHIGAN

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VOLUME 45, NO. 3, SERIAL NO. 844, MAY 21, 1945

Now How About V-J Day?

INASMUCH as all our planning and resources are being geared to a major war with Japan which is expected to last from 12 to 18 months longer, a sudden capitulation on the part of the Japs would be a terrific shock to the nation. It would catch us with our plants down.

What are the chances for Japanese surrender before her homelands are utterly devastated? Nobody in Washington seems to care to stick his neck out on that one. But everybody agrees that if the Japs had any brains at all they'd accept unconditional surrender very soon.

If Japan doesn't accept our terms:

(1) Her cities will be wrecked and ruined far beyond the damage done to German cities.

(2) Millions of her people will be killed; millions more made homeless and starving.

(3) Her industries will be out of production for a generation, leaving no means of livelihood for a population which cannot support itself without exports.

(4) Russia may enter the war later, and the Russians are tough customers, both in war and in peace.

It will take about six months for us to redeploy our forces from Europe to the new bases which are being prepared in the Philippines, and which may be established on the coast of China.

But during that time we shan't be idle. Raids by B-29 Superfortresses will grow in numbers and in intensity, as the numbers of these planes are rapidly augmented. Soon the giant B-32's will enter the fray.

From Okinawa, Flying Fortresses and Liberators moved across from the European Theater of Operations can begin pasting Japan around the clock, just as they did Germany.

Nor will the Navy be idle. Carrier planes will continue their work of death and destruction. Surface ships may spit in the Emperor's eye by moving in close to shore to lob their big shells into Japanese ports. Blockade of Japan's ports by naval craft and by air-strewn minefields may help bring Japan to her knees by starvation.

All in all, air and seapower will be given their first real chance to see whether or not they can win a war alone. They will mete out the most terrific mauling any nation has ever suffered.

A good earthquake or two might help, also; and seismologists tell us that's more than just a possibility.

But if the devious Orientals still refuse to get smart by the end of that six month's period, then we'll have to move in with our ground forces, and that will take some time.

It should be remembered that Japan proper and Japan-in-China taken together are probably three times the size of Germany —also that their transportation systems are poorly developed.

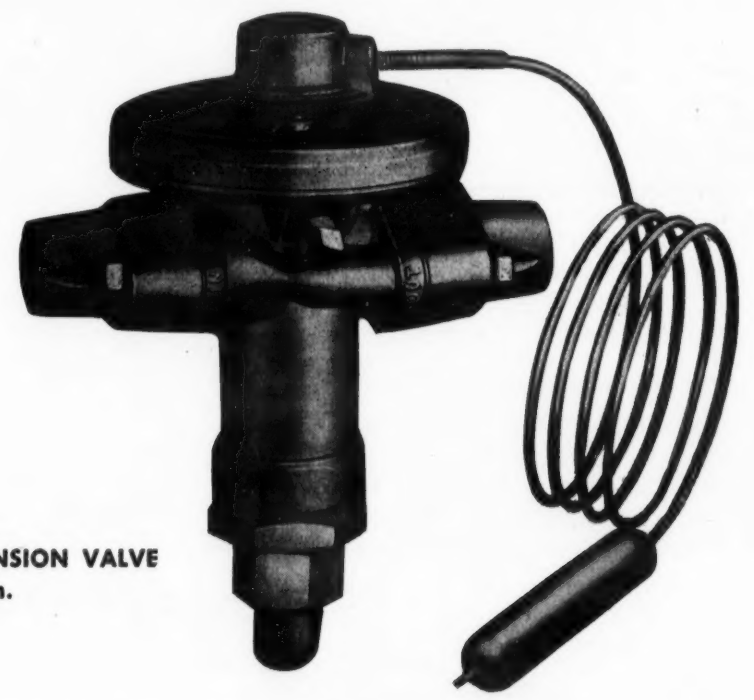
We shall see what we shall see. But alert managers of businesses will take into consideration the possibility that V-J Day *could* come earlier than official forecasts. One must be ready for anything these hectic days.

Pan "Refrigeration River"...

FOR GOLDEN NUGGETS OF HEALTH, COMFORT, ENJOYMENT . . . AND PERSONAL SUCCESS!

The Refrigeration Industry — one of America's eight most promising fields — is like a rushing mountain stream that yielded golden wealth to the "forty-niner". It brings garden-fresh foods to the nation's markets; stores these foods with all their fresh flavor sealed in; manufactures the purest of ice; creates cool comfort for public buildings and homes; creates new surgical anesthetics; lowers living costs while increasing life's enjoyments.

And even greater marvels are in the making, offering forward-looking men now in the armed forces interesting opportunities as engineers, technicians, salesmen, distributors, proprietors of their own businesses. For these men, the future in the great Refrigeration industry will be *highly rewarding!*



MODEL 220K THERMOSTATIC EXPANSION VALVE
Capacity to 32 Ton Freon.

AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET MILWAUKEE 10, WISCONSIN
Export Department — 13 East 40th Street, New York 16, New York

DEPENDABLE REFRIGERANT VALVES

STOCKED AND SOLD BY REFRIGERATION JOBBERS EVERYWHERE . . .
USED AND RECOMMENDED BY REFRIGERATION SERVICE ENGINEERS

Memo
TO REFRIGERATION SERVICE ENGINEERS

May we suggest that you check your customers controls and valves NOW — replacing worn equipment with A-P Dependable units. Illustrated Bulletins upon request.

'Don't Ease Up Sales Promotion Because of Easy Postwar Market,' Store Buyer Warns

ST. LOUIS—Major electrical appliance dealers who "slack off" on promotion following the war because of the general demand for new home equipment will be making a serious mistake, according to Ray Seltzer, major appliance buyer at Famous-Barr Co. here.

Famous-Barr, which will open three new stores in outlying St. Louis soon, is currently getting model kitchens and other institutional-promotion assets ready for the same livewire promotion used in 1939. This, Mr. Seltzer feels, is absolutely necessary to make a return to normalcy which will guarantee plenty of market and goodwill after the first all-out demand for home appliances has died down.

"The first rush of homeowners to buy new refrigerators, home freezers, washing machines, etc., is likely to fool the dealer into thinking he doesn't need to spend a cent for promotion," Mr. Seltzer pointed out. "The natural thing to do when the dealer cannot get enough stock to meet the demand anyhow will be to forget about institutional promotion altogether.

"Sales will come one on top of another for the first year or two, but after that we will all slide back into the same highly competitive field as before the war. Thus it is up to the dealer who wants to make the most of the postwar period to get an early start convincing the public that his store is the logical place to buy. Those who forget about it will find themselves suddenly short of customers when every store will be able to offer approximately the same appliance lines."

Famous-Barr's present major appliance department sold one of the country's largest refrigerator volumes prior to the war—in excess of 2,000 ranges and 2,800 refrigerators in an average good year. Much of that volume came from steadily making it interesting for St. Louis housewives to spend an afternoon at a cooking demonstration in the store—perhaps winning a complete cooked meal to take home, or at any rate learning better culinary practices. After Pearl Harbor, of course, all these facilities were closed up.

All are geared for quick return to service however, according to Mr. Seltzer, who is earmarking all of the first major appliances for duty in the "Rita Ross Kitchen"—a complete all-electric model kitchen which has drawn as many as 200 women in for a single session.

After victory, there will be bi-weekly demonstrations here during which housewives will watch all appliances used in cooking a model meal utilized, and be given exact figures on the time to prepare the foods, and the cost for each.

Sparking the demonstration will be a policy of letting the women guess at the cost, and awarding the foods to the lucky guesser. At the end of each such show the assembled housewives will fill out a prospect card listing their appliance preferences by type, brand, and when they will buy. These Famous-Barr will use as the basis for a direct-mail program—instead of personal follow-ups by outside salesmen such as were carried out before the war.

Mr. Seltzer's experience has been that followups of this kind create more ill will than good; consequently the St. Louis stores will stick to direct mail, plenty of interesting building advertising, and institutional promotion. In this way, St. Louis housewives will be "re-educated" to thinking of Famous-Barr as the place to buy major appliances—right from the first moment after the war ends.

New Firm In Ventura

VENTURA, Calif. — Ventura Refrigeration Sales & Service is the firm name under which Clarence W. Harvey has published a certificate that he is conducting business at 27 West Prospect St., Ventura, Calif.

New ODT Order Allows War Veterans to Operate Trucks in Essential Businesses

WASHINGTON, D. C. — Veterans of the Armed Forces operating such war necessity businesses as refrigeration repairs now can get clearance from the Office of Defense Transportation for the use of trucks needed in their work.

General Order ODT 50, issued May 11, provides that any veteran of the present war may get a non-transferable certificate of war necessity for the use of a truck in any business or activity owned, operated, or controlled by him exclusively, so long as such activity isn't going to run counter to the war effort or the maintenance of essential civilian economy.

He will not be required to prove, as non-veterans will, that the proposed operation is necessary to the war effort or the maintenance of essential civilian economy. But he must show, before getting the certificate, that he has complied with any local ordinances or state or federal laws that bear in.

The order doesn't give the veteran any special preference in getting hold of a new truck. Where 720,000 new trucks were bought in 1941, only 221,000 were available to civilians during the first three war years of 1942-1944. The present supply is no less scarce.

Nor is the ODT approval necessary if a veteran is able to buy a used truck. But he is required to check with ODT before buying it, and learn whether or not he will be able to get a certificate of war necessity for its proposed use.

A war veteran, says the order, is anybody who served at least three months in the armed forces after Sept. 16, 1940, and who has an honorable discharge.

Applications for the certificates of war necessity are issued at ODT and OPA district and field offices.

CITY WOMEN

SUBURBAN WOMEN

A recent survey of women

all over the country shows that:

53 out of 100 women say General Electric makes the best electrical appliances for the home

Complete Line of
HERMETIC
Self-Contained OPEN TYPE
and REMOTE TYPE
Refrigerating Units
1/8 TO 20 H.P.
UNIVERSAL COOLER
MARION OHIO — BRANTFORD ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION
Automatic Refrigeration since 1922

Gilmer BELTS

Failure of a belt on air conditioning and refrigeration units is harmful to important war production. Be prepared to meet the demand for this type of replacement business by stocking rugged, long-lived, efficient Gilmer Belts. Gilmers are not only good-will builders . . . they are sure profit builders for you. Order a supply from your jobber now.

L. H. GILMER COMPANY
Tacony, Phila. 35, Pa.
Division of United States Rubber Company

General Television Gets New Building

CHICAGO — Herman R. Rose, president of General Television & Radio Corp., Chicago, has announced the purchase of the building formerly occupied by Press Wireless, at 2701-17 Lehmann Court, Chicago. General plans on moving to its new location on or before June 10.

Leedy Changes Name

WARSAW, Ind.—"Leedy Electric and Equipment Co." is the new name under which Leedy Electric Co. here is now operating, announces C. Devoe Leedy, owner. No change in ownership, management, or operation was made.

Morris Joins R. F. Trent

RALEIGH, N. C.—Ed. Morris, formerly with C. H. Stephenson Music Co.'s electrical appliance department, has joined the R. F. Trent Co., Frigidaire distributor here.

'Largest Hardware Retailer' Has Unusual Plans For First Shot at Appliance Selling

ST. LOUIS—Central Hardware Co., claiming to be the nation's largest retail hardware organization, will handle complete lines of major electrical appliances in its three St. Louis stores after victory, according to an announcement recently released.

Never handling major appliances before, the company is going into this field with a service operation completely built up before the first new refrigerator is actually received. Realizing the value of a smoothly operating reconditioning and repair shop to the future, Central is setting up complete facilities at the main building at 7410 N. Union in North St. Louis, which will be staffed entirely with ex-servicemen trained in the Army's quartermaster refrigeration schools.

"We will probably be able to use 20 repair mechanics," David Oxehandler, general manager, said, "And will attempt to work in as many disabled or partially crippled war veterans as possible."

Absorbing these men, Central Hardware expects to work on a huge volume of trade-in refrigerator reconditioning, as well as warranty maintenance on new appliances.

"We're not planning to lay emphasis definitely on brands of refrigerators, ranges, etc.," Mr. Oxehandler stated, "Instead, profiting by our experience in selling coal stokers to the St. Louis market, we will present several brands of refrigerators sold on the basis that the customer will get so many years of good refrigeration for her home at a certain cost, backed up by our well-accepted service departments.

"In other words, we are going into refrigerators on the basis that we will sell service and satisfaction over a term of years, rather than an individual product. All the emphasis is going to be on service."

Commercial Standards Are Issued For Prefabricated Dwellings

WASHINGTON, D. C.—At the instance of the Prefabricated Home Manufacturers Institute, a commercial standard for prefabricated homes has been issued by the National Bureau of Standards, effective for new production May 10.

This standard which is, in effect, a commodity specification, is voluntarily established by those who desire to conform to its requirements, and is a result of the Bureau's own ideas modified by suggestions received from manufacturers, distributor and user organizations, and Government agencies to whom it was submitted for comments.

The Department of Commerce, of which the Bureau of Standards is a part, has no regulatory powers in the enforcement of these standards and emphasized the fact that this suggested standard is in no sense a plan of governmental control or regulation. Compliance with its provisions is entirely voluntary.

The minimum requirements for prefabricated structures of one, one and a half, and two stories cover structural strength of materials, foundations, chimneys, plumbing, heating, insulation, lighting, ventilation, and electrical wiring, also erection at the site and protection during transportation and erection.

Of particular interest to the electrical, heating, and refrigeration industries are the requirements on insulation and electrical wiring.

Structures must be provided with sufficient resistance to heat loss by insulation, or otherwise, so that the heat loss of any furnished dwelling space and the total heat loss of the dwelling, in B.t.u. per hour, shall not exceed 60 times the floor area in square feet.

The heat loss is to be calculated in accordance with the A.S.H.V.E. Guide and is to be based on maintaining 70° F. inside air temperature at 5 ft. above the floor with the corresponding outside temperature as recommended in the Guide, or in accordance with established local practice.

The subject of Electrical Wiring was dismissed with the provision that it shall conform with the recommendations of the National Electrical Code, notwithstanding the suggestions submitted by the Adequate Wiring Bureau and the National Electrical Manufacturers Association.

It was pointed out by these organizations that greater adequacy in wiring is needed in the home than is required by the National Electrical Code. This effort was also endorsed by the Prefabricated Home Manufacturers Institute but it was denied on the grounds that the suggestions were quite voluminous and if the standard incorporated so much detail on wiring, it would be necessary to go into considerable detail on a number of other component parts of the house.

Copies of this document, known as Commercial Standard CS125-45, which includes, in addition to the specification, a list of those who have accepted it, a brief history of the project and personnel of the standing committee, may be obtained on application to the Superintendent of Documents, Washington 25, D. C.

SMALL-TOWN WOMEN

FARM WOMEN

This preference is *more than twice* that for the next most popular brand!

And General Electric is working now to build still greater preference for *each individual appliance*, with one of the greatest advertising campaigns in our history!

- **"The G-E House Party,"** a sparkling, "audience participation" daytime radio show available to *28,000,000 homes, five days a week* over the CBS network of 142 stations.
- **Over 670,000,000 individual advertisements** in consumer magazines during 1945. Real *product selling* for G-E Refrigerators, Ranges, Laundry Equipment, Electric Sinks, Electric Blankets, Clocks, Irons, Toasters, and Coffee Makers.

That's why successful merchants will feature the *full line* of General Electric Home Appliances as soon as they're available. General Electric Co., Appliance and Merchandise Department, Bridgeport, Conn.

For Victory—General Electric is working night and day to back the attack. You can help, too, by buying and holding more War Bonds than before.

TUNE IN:

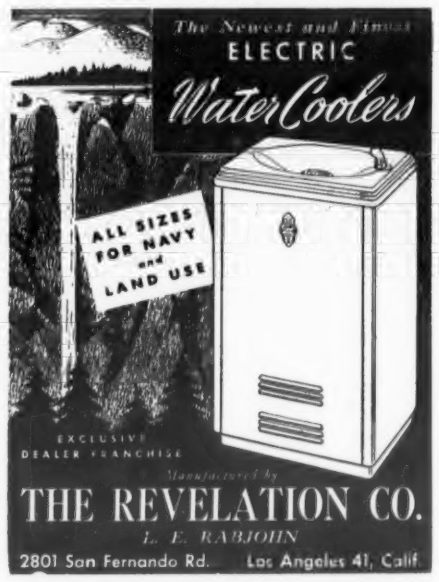
"The G-E House Party," every afternoon, Monday through Friday, 4 p. m., E. W. T., CBS.

"The G-E All-Girl Orchestra," Sunday, 10 p. m., E. W. T., NBC.

"The World Today," News, Monday through Friday, 6:45 p. m., E. W. T., CBS.

EVERYTHING ELECTRICAL FOR HOMES AFTER VICTORY

GENERAL ELECTRIC



WRITE FOR CATALOG

Due to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

Over 75 YEARS REFRIGERATION EXPERIENCE

is on the record of the 5 Key men in the West's most modern Supply Jobber and Equipment Distributor.

WHAT DOES THIS MEAN TO YOU?

Simply This! If you are a dealer, contractor, or service operator in our area . . . . design, engineering, sales, and financial assistance in ADDITION to a COMPLETE source of supply.

If you are a manufacturer of equipment, parts, or supplies . . . . an alert experienced organization ready and able to promote finer products for the good of the industry.

UNITED COMMERCIAL SALES CO

Refrigeration - Air Conditioning - Products - Parts and Supplies

944 South Grand Avenue, Los Angeles 15, California

LARKIN

REFRIGERATION PRODUCTS

Write for New Catalogue

Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Pans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers—Air Conditioning Coils—Industrial Units.

LARKIN COILS, Inc., 519 Memorial Dr., S.E., Atlanta, Ga.

Photo-Electric Cells Record Tobacco Smoke Concentrations at Madison Square Garden

Smoke Control Study Is First Step Toward Better Visibility, Less Eye Irritation

BOSTON — Use of photo-electric cells and a special spotlight to indicate intensity of tobacco smoke in New York City's famous Madison Square Garden was described at the annual meeting of the American Society of Heating and Ventilating Engineers here by Charles S. Leopold, consulting engineer, in a discussion of tobacco smoke control problems in auditoriums.

The study was undertaken as a preliminary step to determine what may be done to obtain greater control over tobacco smoke concentrations in air, since high smoke concentrations interfere with vision of the spectators, cause eye irritation, and create objectionable odors, pointed out Mr. Leopold.

Test setup included a light projector mounted in one corner, 16 ft. above the arena floor sending a level narrow light beam of about 500,000 candlepower to the receiving device 240 ft. away in the diagonally opposite corner of the arena.

Receiving device consisted of two selenium type self-generating barrier layer cells protected from all light sources except the projector, and connected to a microammeter.

To make the tests, which were conducted during an evening of basketball games and during an evening of prize fights, readings of light intensity were made every 10 minutes by turning on the projector for 30 seconds and noting the meter.

During the tests effort was made to determine the possible effect on smoke concentration by varying the rate of ventilation. There are four supply fans and four exhaust fans on each side of the enclosure. In addition, one exhaust fan is located at each end.

Tests were conducted using all outdoor air, untreated except for filtering and heating, and the fans, operated by three-speed motors, were run at low and intermediate speeds during the tests. All exhausts were operated in conjunction with the supply, resulting in a slight positive pressure in the arena at all times.

TEST CONDITIONS

During the first part of each test night, the arena was supplied with 174,000 c.f.m. of air, or about 10 c.f.m. for each of the 17,500 occupants. During the second half of the evening, the ventilation system was speeded up to provide 240,000 c.f.m., equivalent to 13.7 c.f.m. per person.

Using 1.0 for 100% transparency (i.e., no interference in light transmission by smoke), the tests showed a gradual decline in transparency each evening as the crowd assembled in the arena. On the basketball night transparency dropped to about 0.64 with the ventilation rate of 10 c.f.m. per person.

When the ventilation rate was jumped to 13.7 c.f.m. per person the transparency level promptly rose to about 0.7, and as the game ended and spectators began to leave the transparency rose sharply.

Transparency curve for the boxing program resembled that for the basketball program, with exceptions. Apparently there were more smokers, or more smoking, for the transparency curve dropped to a trifle below 0.6. Stepping up of the ventilation rate from 10 c.f.m. per person to 13.7 c.f.m. occurred just before the start of the main bout, at which time, apparently, everyone "lighted up."

Transparency had climbed to about 0.62 with the higher ventilation rate, but the increased smoking quickly reduced it to approximately 0.6. The higher ventilation rate, however, gradually raised the transparency.

"Dependable data were not obtained as to the percentage of cigars, cigarettes, or pipes which were lighted, nor for the total number of smokers," explained Mr. Leopold.

"A count of only 350 people during a fight indicated that less than 20% had lighted cigars, cigarettes, or pipes. This figure is lower than the values usually assumed and indicates the desirability of further check.

"During these tests the consensus of observers was as follows:

"Eye irritation corresponded to a smoke density of 0.167 (transparency 0.675). The visible smoke cloud in the spotlights was judged as objectionable at a density of 0.145 (transparency 0.72) as viewed from the arena floor level and 0.760 when viewed from the projector location.

"Haze, though quite evident, was judged as 'commercially acceptable' at a density of 0.097 (transparency 0.8) viewed from the arena. The estimate of 'objectionable' is more definite than that of 'commercially acceptable,'" points out Mr. Leopold.

RESULTS OF THE TESTS

According to the results of the tests, Mr. Leopold advises that the cost of improving transparency through increased ventilation rises rapidly above the 80% transparency mark.

In a discussion of visual effects, the speaker declared:

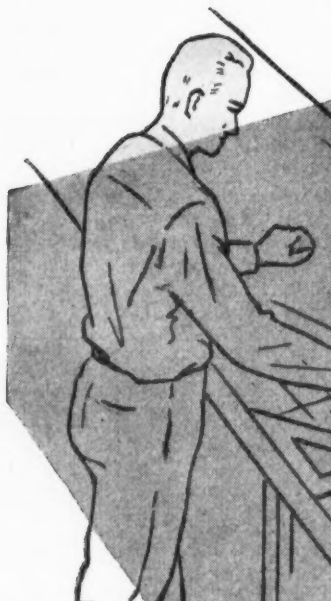
"A smoke cloud causes a decrease of light reaching the performer and a decrease in light reflected from the performer to the spectator. The resulting decrease in vision is relatively small at any rate of ventilation

(Concluded on next page, Column 1)

Your Plans for Postwar Expansion and Modernization Will Include Refrigeration and Air-Conditioning . . . All Requirements Will Be Met by

CURTIS

COMMERCIAL REFRIGERATION AND AIR-CONDITIONING UNITS



Users attest to the dependable, trouble-free, and economical performance of Curtis Equipment.

Just as Curtis is today planning ahead to add new units and to improve and refine many features to keep pace with postwar demand, you, too, should be seriously thinking of the postwar market for air conditioning and refrigeration equipment.

All reports definitely prove the fact that of all industries scheduled for postwar expansion, air conditioning and refrigeration are close to the top. You can get your share of this business by laying a solid foundation *now*, and you can count on Curtis to assist you in every way possible.

Today, all Curtis Units except packaged air-conditioners are available under proper allocation. When Victory is won, the complete Curtis line, improved, up-to-the-minute, and reflecting the experience gained over 91 years, will be ready for you. But — start planning now!

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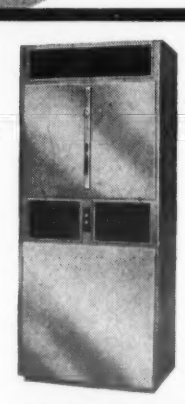
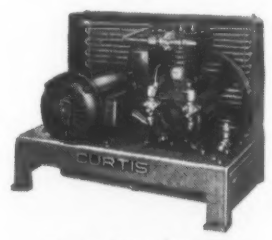
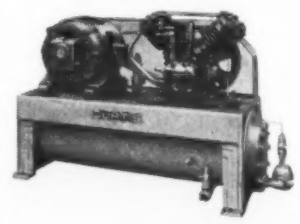
You'll be interested in reading about the possibilities in the field of air conditioning and refrigeration. Write today for Bulletins C-64-E, C-68-C, and C-14-M, covering this interesting and profitable business.



5-hp. Curtis Packaged Air-Conditioner



1½ hp. Curtis Condensing Unit



15-hp. Water-cooled, Shell and Tube Condensing Unit

CURTIS REFRIGERATION AIR CONDITIONING and COMMERCIAL

CURTIS REFRIGERATING MACHINE DIVISION

of Curtis Manufacturing Company

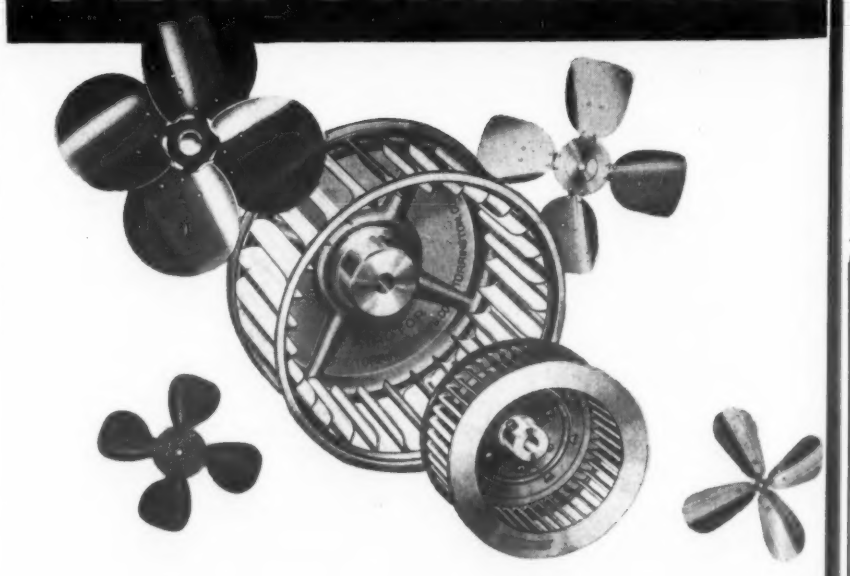
1912 Kienlen Avenue, St. Louis 20, Missouri

R-446

FOR VICTORY BUY MORE U. S. WAR BONDS AND STAMPS

MATCHLESS

PERFORMANCE



To secure matchless performance in any unit requiring the movement of air, it is essential to have the *correct* air impeller. Costly design changes and production delays may be avoided if you will let us help you make the choice *in the early stages of design.* Among the great variety of propeller fan blades and centrifugal blower wheels which we make, there will be one exactly right for your application.

The many factors to be considered in selecting an air impeller are listed on our Air Impeller Specification sheet. Write for one today, then submit it for our recommendation and quotation.

AIR IMPELLERS *for every purpose*

THE TORRINGTON MANUFACTURING COMPANY, TORRINGTON, CONN.

Smoke Control Under Survey At Madison Square Garden

(Concluded from preceding page)

which would be adequate for the elimination of other forms of discomfort.

"Vision, similarly to other human senses, approximately follows the Weber-Fechner Law to the effect that the change in stimulus required to produce a noticeable change in perception is proportional to the pre-existing stimulus. . . .

"There is a very low level of illumination in the spectator space and any factor causing a decrease in vision would therefore be more noticeable when trying to discern detail across the auditorium than it would be in looking at the brightly illuminated center of interest.

"There is a further decrease in visual perception due to the light which is scattered from the spotlight beams competing with the stimulus from the center of interest. For very heavy concentration of smoke, decrease of light due to opacity may be of importance.

"For reasonable ventilating rates, the most objectionable visual effect is the awareness of the smoke cloud. The visual effect may be partly of psychological origin, but it is none the less real. The psychological factors involved are beyond the scope of this paper," declared Mr. Leopold.

VISUAL ANGLE EFFECTS

"The objectionable qualities of this effect depend on the angle formed by the line of sight and the line of the spotlights, and further on the depth of the smoke cloud through and beyond the center of interest. Thus, a spectator looking from the spotlight to the center of interest is less conscious of the cloud than is the spectator looking at right angles to the projector beam; and a spectator on the arena floor, looking across the ring the long dimension of the building, is more conscious of the smoke cloud than is a spectator looking across the short dimension of the building.

"From the former observation it would follow that in a motion picture theater, where the sight line largely parallels the line of projection, smoke would interfere very little with vision, and this appears to be the case. In motion picture theaters, smoke is quite evident in the beam if the observer looks across the beam rather than at the screen. . . .

ODOR PROBLEMS

"The odor problem in the Garden may be subdivided into:

"Odor for the acclimated spectator;

"Odor for the spectator entering the house;

"Odor remaining in the clothes.

"Due to rapid olfactory fatigue, there is no pratical problem of odor for the acclimated spectator," said Mr. Leopold. "An odor must be indeed objectionable to a person entering the auditorium to be even perceptible to a spectator who has been inside for a short time.

"Any quantity of outdoor air which will assure satisfactory visual effects will avoid objectionable odor for the acclimated spectator. It could be of importance in an extreme case, such as the use of a very small quantity of outdoor air in combination with some form of apparatus in the recirculated air system which would remove the visually objectionable smoke without the removal of the odor-causing substance.

"A patron going to his seat must first pass through a ventilated lobby. As a rule, smoke concentration in a lobby is somewhat less than in an auditorium, though this condition can at times be reversed. If there are two steps of increasing smoke concentration, odor perception is minimized by the relation of change in stimulus to the pre-existing stimulus and rapid olfactory fatigue.

ODOR ABSORPTION

"The factors affecting the odor of tobacco remaining in the clothes have not been adequately investigated. The relative importance of smoke, density, time, temperature, and water vapor is not known, either for the period of exposure or for the period which follows."

Mr. Leopold warned that "the specific data of these tests, in general, cannot be safely extended to enclosures with different types of occupancy and different physical arrangements."

Since the test method outlined is "relatively uncomplicated and convenient for use in the field," he urged that additional data be obtained and correlated by the industry.

San Mateo, Calif., Dealer Opens 2 Branch Stores

SAN MATEO, Calif.—Modern Appliance Co., with main offices at 111 South Ellsworth Ave., here, has recently opened two retail branch stores. One of these branches is located at 1203 Burlingame Ave., Burlingame, Calif., and the other at 2038 Broadway, Redwood City, Calif.

Joyce Leaves RCA Victor To Join Distributorship

PHILADELPHIA — Thomas F. Joyce, formerly general manager of the radio, phonograph, and television department of the RCA Victor Division, Radio Corp. of America, has purchased an interest in, and will become general manager of, the Raymond Rosen & Co., appliance distributor here, announces Raymond Rosen.

Mr. Joyce will take over the responsibilities handled by the late Albert Slap, who, with Mr. Rosen and Joseph Wurzel, organized the firm in 1926. Before the war, the company was said to be the largest specialty distributor in Pennsylvania.

Among the lines handled are Kelvinator and Leonard refrigerators, RCA Victor radios, phonographs, and television receivers.

Harry Hoffman Heads Midwest Jobber Assn.

DAVENPORT, Iowa—Harry Hoffman, Hoffman Supply Co., Springfield, Mo., was elected chairman of the Midwest Refrigeration Supply Jobbers Association at their recent meeting here.

G. F. Wickham, Wickham Supply Co., Lincoln, Neb., was elected vice chairman. The new secretary is Frank R. Pond, Refrigeration & Industrial Supply Co., Inc., Minneapolis.

There were 45 manufacturer's representatives, jobbers, and jobbers representatives present at the meeting.

DEALER FRANCHISES WANTED

"We are interested in handling a complete line of refrigeration equipment. Condensing units from ⅛ to 20 H.P., refrigerators from small apartments to large walk-ins, freezers from 5 to 24 cubic feet, and air conditioning equipment of all kinds. We are located in a large Mid-western community of approximately 700,000, and would be open to any promising propositions."

Air Conditioning & Refrigeration News, Box No. 1724

PROFIT OPPORTUNITY

A manufacturer now producing and selling, nationally, a proven INDUSTRIAL REFRIGERATION MACHINE to a specialized field desires to dispose of this Division, including all production, sales, and patent rights, either on an outright purchase or contingent basis.

This split up is necessitated by lack of plant and personnel facilities to meet the increasing volume being done in this field. The primary manufacturing division of this organization, not associated with refrigeration, demands its undivided attention.

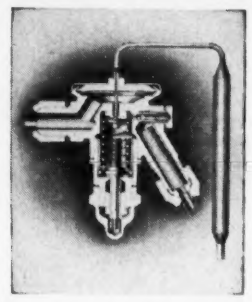
A $25,000 to $50,000 investment will be necessary—depending on how the deal is set up.

This is the kind of opportunity that an organization or an individual with experience in producing and selling commercial or industrial refrigeration could take over with prospects of immediate substantial profits.

Box 1730, Air Conditioning & Refrigeration News.

GENERAL CONTROLS

V-200 Thermal Expansion Valve



Interchangeable Orifice Cartridge Permits Proper Sizing ON THE JOB!

The G. C. V-200 Thermal Expansion Valve can be quickly and accurately sized to any particular installation load, by simply inserting the proper orifice cartridge *on the job.* It eliminates the necessity of carrying a large stock of complete valves of different capacity.

The unsurpassed sensitivity and dependability of this famous valve is achieved, in part, by a diaphragm of adequate area • the well-balanced, low-rate adjusting spring • the full-opening tight-closing ball • and the practically frictionless single pusher pin.

The V-200 handles freon, methyl, chloride, or sulphur dioxide.

Write for Catalog 52-B, for complete description.

Address nearest Factory Branch or Distributor, or write direct to

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801 ALLEN AVENUE GLENDALE 1, CALIF.

FACTORY BRANCHES: PHILADELPHIA • ATLANTA • BOSTON • CHICAGO • KANSAS CITY • NEW YORK • DALLAS • DENVER • DETROIT • CLEVELAND • HOUSTON SAN FRANCISCO • SEATTLE • PITTSBURGH • DISTRIBUTORS IN PRINCIPAL CITIES

General Electric makes a specialty of the little things . . .

Like developing catalogs and instruction manuals that make your servicing problems smaller. Or, producing merchandising, sales and promotion helps that make your sales problems simpler.

Yes, G-E *has* grown big. By following the same progressive pathway used by successful dealers: offering good products, good service.

The famed G-E Monogram, known the world over, has come to stand for...high standards of performance and dependability . . . competitively priced equipment . . . and fair profit margins to dealers.

And out of our research and *bigness* will come tomorrow's improved and new products to make *more and more* fast friends for G-E and its dealer family alike.

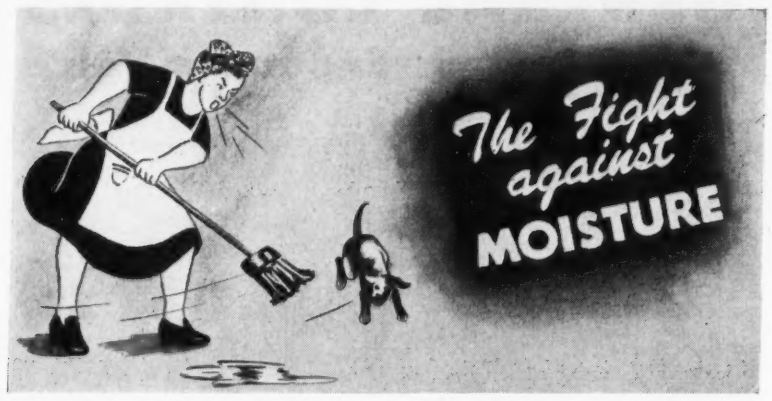
So, if you're interested in the little things that lead to bigness, you owe it to yourself to "see G-E first." *General Electric Company, Air Conditioning Department, Section 5705, Bloomfield, New Jersey.*

BUY . . . and hold . . . WAR BONDS

GENERAL ELECTRIC

Air Conditioning

Tune in: The "G-E HOUSE PARTY," every afternoon, Monday through Friday, 4 p. m., E W T, C B S . . . The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 P. M., E W T, N B C . . . "THE WORLD TODAY" News, Monday through Friday, 6:45 P. M., E W T, C B S



A Technique Which Removes Both the Cause and the Effect is Excellent, *but* . . .

. . . one that *excludes* the cause . . . *prevents* it from getting in at all . . . is *even better.*

The use of TZ in refrigeration units for the elimination of freeze-ups at the expansion valve, as well as the destruction of moisture and acid by chemical processes, is the Thawzone curative technique . . . the removal of both the cause and the effect. It's excellent and necessary for systems *already ailing.*

But, better still, is TZ inoculation of old, new, and reconditioned systems. To *exclude* the cause *before* trouble starts. That's *preventive* technique.

Refrigeration supply jobbers everywhere carry TZ.

THAWZONE
The PIONEER FLUID DEHYDRANT

HIGHSIDE CHEMICALS CO.
195 Verona Ave.
NEWARK 4, N. J.

Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Multiple System Design Problems

A multiple system is one consisting of one condensing unit and two or more evaporators. Ordinarily each of these two evaporators are in separate compartments or refrigerators, sometimes of different sizes, at different temperatures and sometimes loaded unequally.

The most simple multiple system is one having two identical evaporators, equally loaded, operating at the same temperature, and both in use at all times. This would present no problems, but if we attempt to operate one of these evaporators at a different temperature than the other, load one more heavily than the other, (introduce more heat to it) or take one out of operation, leaving the other on the line, or vary the load on one or the other from time to time, then we run into problems.

TWO IDENTICAL COOLERS IN MULTIPLE

Consider a specific installation in which there are two identical 6 by 8 foot walk-in coolers each with a forced convection evaporator (blower-coil) connected in multiple on a ¾-hp. condensing unit.

Both coolers are operated at about 38° F. and are loaded about equally. Each cooler imposes a load of 2,000 B.t.u. per hour making a total load from both coolers of 96,000 B.t.u. per 24 hours. At a 25° F. average evaporator temperature (25 PSI—"Freon-12") the condensing unit has a capacity of 6,000 B.t.u. so it will normally run approximately 16 hours out of the 24.

The fan motors are wired for continuous operation and the machine is controlled by a low pressure control set 37 PSI on, 21 PSI off, giving an average coil temperature of 25° F. Under conditions of equal and unvarying loads on the two evaporators the operation of the condensing unit will be regular and the temperatures will remain constant.

REDUCTION TO ONE-HALF LOAD

Suppose that for some reason one evaporator is taken off, that is, the liquid and suction branch valves to one evaporator are turned off, leaving the condensing unit to operate one evaporator only. So a condensing unit having a capacity of 6,000 B.t.u. per hour has on it but one evaporator imposing a load of but 2,000 B.t.u. per hour.

The condensing unit that has a capacity of 6,000 B.t.u. per hour at 25° F. suction temperature (25 PSI) has a capacity of 3,000 B.t.u. per hour at -11° F. average suction temperature, which corresponds to 4 PSI. Therefore, the suction pressure would drop to 4 PSI to enable the condensing unit to adjust itself to the decreased load, and it would be necessary to reset the low pressure control to cut off at about 2 PSI, for the suction pressure would rapidly drop to about 6 PSI and gradually pull down to about 2 PSI in order to give an average coil temperature of -11° F.

It would be necessary to retain the cut-in setting of 37 PSI in order to obtain a defrost of the coil before the condensing unit started after an idle cycle. Therefore, the idle cycle would be quite long, while the coil warmed up from -5° F. (corresponding to 2 PSI) to 34° F. to obtain a clean defrost.

Consequently, the temperature of the air in the refrigerator would vary widely, so that, instead of the temperature being 38° F. and varying no more than a degree or so, it might run as high as 50° or 55° before all the frost accumulated on the evaporator is melted off and the pressure control again starts the condensing unit.

SAVINGS NOT PROPORTIONAL TO LOAD REDUCTION

Although the load was cut in half by taking one of the two equal coolers off the machine, the running time will not be cut in half, that is, to eight hours out of the 24 for the reason that, when the condensing unit is operating on only one cooler it is operating at a very low suction pressure and consequently its capacity is greatly reduced.

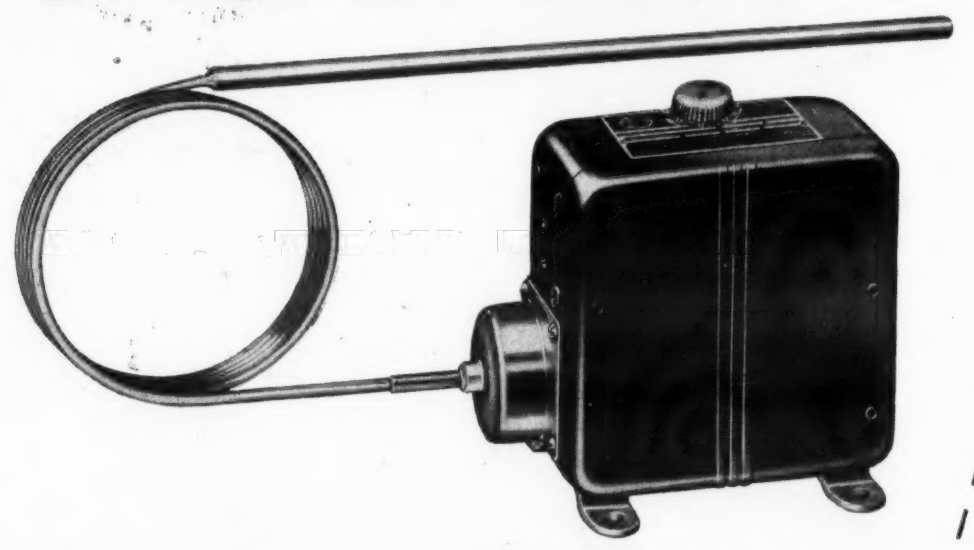
It will operate less than on both coolers, however, because the early part of the running cycle is at comparatively high suction pressure and consequently at high capacity. Instead of running eight hours out of the 24 it will perhaps run 10 or 12 hours—about 40 to 50% of the time.

TWO UNEQUAL LOADS AT THE SAME TEMPERATURES

Suppose, however, that instead of two walk-in coolers of equal size we have one 10 by 10-foot walk-in cooler imposing a 24 hour load of 80,000 B.t.u. and with it a small reach-in

(Concluded on next page, Col. 1)

Stop spoilage and waste...



with proper temperature control

• Food is critical! Yet much of it is lost through spoilage and waste. These inroads into our food supply could be largely checked by proper temperature control in refrigeration.

It was to give commercial "above-freezing" installations the highest degree of protection possible that PENN developed AVRGAIRE . . . a single temperature element control. Influenced by the average temperature of both coil and air, this low-cost, highly-efficient control maintains extremely close regulation of box temperature.

When the box load is normal, AVRGAIRE defrosts the coil on each operating cycle. *Defrosting is delayed,* however, when the box is loaded with warm produce and extra cooling capacity is necessary. Humidity is accurately controlled to minimize dehydration and "sliming" losses.

Don't be satisfied with half-way measures in your refrigeration installation—see that your controls give complete protection. Get the full story on AVRGAIRE, complete with pictures and diagrams.

Write *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ontario.

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AUTOMATIC CONTROLS
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Ansul was first in America to produce Sulfur Dioxide for refrigeration (1915).

At the demand of the growing fractional-tonnage household refrigeration industry, Ansul began production of Methyl Chloride.

Ansul still analyzes *individually* every cylinder before it is shipped because—

LIQUID Sulfur Dioxide BY ANSUL*
LIQUID Methyl Chloride BY ANSUL*

The purity, dryness, and safety of handling of Ansul refrigerants are still top standards of a high-specification industry which Ansul is proud to have pioneered

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"NOW IN OUR 30TH YEAR"
MARINETTE, WISCONSIN
AGENTS FOR KINETIC'S "FREON-11," "FREON-12" AND "FREON-22"

Multiple System Design Problems

(Concluded from preceding page)

box imposing a load of 16,000 B.t.u. per 24 hours making a total 24 hour load of 96,000 B.t.u. Both of these are connected to a ¾-hp. air-cooled condensing unit having a capacity of 6,000 B.t.u. per hour, so the machine would operate 16 hours per day.

The blower coils in the cooler and reach-in boxes are proportioned to operate at 25° F. average coil temperature and the pressure control is set at 37 PSI cut-in and 21 PSI cut-out which gives an average temperature in each cabinet of 38° F.

Again, for some reason the reach-in is cut off the line, that is, branch liquid and suction line valves to the reach-in are closed leaving only the 10 by 10 cooler on the condensing unit. There would be little effect on the overall operating characteristics of the installation.

Coil temperature of the blower in the walk-in would perhaps be a degree or so lower and the average suction pressure would be perhaps 22 PSI instead of the 25 PSI when both cabinets were on. Instead of operating 16 hours per day the condensing would operate about 14 hours out of the 24.

REDUCED LOAD MUST EQUAL ONE-HALF MACHINE CAPACITY IN 24 HOURS

Naturally, we wonder where is the dividing point. We see that if one of two equal loads are removed from the condensing unit, that is, one-half the load, the system is thrown badly out of balance, but that there is very little effect if one-sixth of the load is cut off.

Where, in between, is the danger line? From experience it can be said that in a multiple installation, the load *left on* the machine after one or more of the evaporators are cut off, *should be not less than one half of the 24 hour capacity of the condensing unit at the suction temperature at which the remaining evaporator or evaporators normally operate.* This applies whether all evaporators operate at one temperature or at different temperatures.

(To Be Continued)

'Air Conditioned Acre' Provides All Weather Tests For Superforts

EGLIN FIELD, Fla.—The coldest and hottest spot on earth, an "acre of tropical and arctic hell" inside a mammoth new hangar here at the Army's southern proving grounds will soon subject the nation's B-29 superfortesses and other heavy bombers to unearthly climates.

From a central control board engineers will be able to out-freeze the arctic and top the extremes of the equator with a range of temperatures from —70° F. to 165° F., according to research men of the York Corp. who designed the sub-zero refrigeration system.

The new hangar, probably the largest single refrigerated space within heavy blankets of insulation for such extreme temperatures, will permit for the first time the observation of performance of gigantic planes in controlled air conditions.

Tiny self-propelled cars completely enclosed in glass and resembling a Buck Rogers device will carry their own miniature air conditioning systems to protect observers working inside the hangar against heat exhaustion when temperature and humidity are at their peak. Temperature of 135° F. is the maximum a man can be subjected to for any length of time according to army regulations. The 165° heat will be supplied by 200,000 cubic feet of air a minute passing over steam coils.

One of the major tests in the hangar will be to determine how readily a plane can be started on a cold morning—at polar temperatures. These tests are now being run in Alaska until the present installation is completed. Engineers will also blow hot and cold on their planes to test the effect of superchargers used in stratosphere flying, on heaters, gas lines, and tanks, and on the lubricants and fuels themselves. At —90° F., for example, it is known that ordinary gasoline freezes solid, lubricants stiffen, and rubber becomes as brittle as glass.

Inside the hangar, 200 feet long, 250 feet wide, and 70 feet high, a half million cubic feet per minute of sub-zero air will pour through ducts for two days to drop the temperature from 90° F. to —70° F.

A traffic system of air and a labyrinth of steel ducts 10 feet square are designed to control the flow of heat or cold into the hangar. Alongside the building a battery of eight chambers, resembling military blockhouses and 30 feet high will be equipped with 60 wood and steel insulated doors, each weighing a ton and a half.

Other sets of doors in the chambers will permit air to be drawn back from the hangar and recirculated in a continuous cycle. By means of control dampers, engineers will be able to balance the pressure inside the hangar and control temperatures within 2½° over or under the desired temperature.

Two chambers will be used for heating and the other six will be required to provide polar atmospheres. The cooling chambers will draw their supply of refrigeration from six centrifugal compressors with a combined capacity of 860 tons.

The final degree of accuracy in maintaining constant temperatures in the hangar is made possible by automatic dampers in the hot and cold air ducts and by sensitive thermostats. As much as 50,000 cubic feet of air a minute can be drawn in from the outside to purge the testing space of exhaust gas and carbon monoxide generated by equipment on test.

Attached to the main hangar is a smaller cold chamber 80 feet long and 25 feet square which will have the same range of temperatures for tests on various types of aircraft engines where a whole plane assembly is unnecessary. Thousands of feet of cork insulation and hermetically sealed hangar doors will seal these areas in from the outside. At the press of a button, however, these doors open the entire side of the main building.

Headquarters

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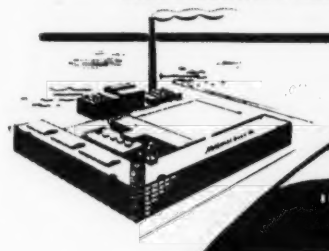
for domestic, commercial and low temperature cabinets

Standard and custom built designs. If you are a manufacturer or jobber, write for our new Refrigerator Hardware Catalog No. R-88.



SURFACE TYPE HARDWARE
"THRU THE DOOR" HARDWARE
EDGE MOUNTED HARDWARE
PLASTICS
DIE CASTING

NATIONAL LOCK COMPANY
Refrigerator Hardware Division
ROCKFORD, ILLINOIS

5 GOOD REASONS WHY
You Should Always Specify
SPORLAN VALVES
With Selective Charges "C" and "Z"
on All Small
Commercial Refrigeration Applications!

CZ

and Remember...
only SPORLAN can give you this PEAK PERFORMANCE
because

1 Sporlan selective charges C and Z prevent flooding the evaporator at the start of the cycle.

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3 Sporlan selective charges C and Z minimize hunting during the running cycle.

4 Sporlan selective charges C and Z close the valve quickly and positively when the compressor stops.

5 With Sporlan selective charges C and Z the control is always in the bulb, no matter how cold the valve diaphragm becomes.

SPORLAN
Peak Performance
VALVES

How to Determine Which of the Two Charges to Use is Simplicity Itself

Just remember that the Sporlan C charge is always used on all jobs with suction temperatures ABOVE ZERO. *The Sporlan Z charge is always used on all jobs with suction temperatures* BELOW ZERO.

SPORLAN C CHARGE
For All Small Commercial Refrigeration Applications With Suction Temperatures
ABOVE ZERO
DISPLAY CASES — WALK-IN COOLERS
REACH-IN BOXES — WATER COOLERS
BEVERAGE COOLERS — FLORIST BOXES

SPORLAN Z CHARGE
For All Small Commerical Refrigeration Applications With Suction Temperatures
BELOW ZERO
ICE CREAM CABINETS
FARM FREEZERS — HOME FREEZERS
LOCKER PLANTS

Other Sporlan Selective Charges are the Type G for all Comfort Cooling Installations and the Type X for all applications below-30° F.

Sporlan Manufactures Solenoid Valves • Solenoid Pilot Controls • Modulating Pilot Controls • Refrigerant Distributors and the only Thermostatic Expansion Valves with Selective Charges

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Will it have a handsome modern Dial Thermometer?

● If you are planning refrigeration equipment, particularly the "cold box" type, the Marsh organization is in an excellent position to produce dial thermometers that will grace your equipment—thermometers as accurate as they are attractive. Yet, thanks to modern production methods, we can supply them in quantities at a cost that you can justify in a highly competitive market.

If your present plans do not call for a thermometer, consider this sales building feature in the light of competition that is bound to come. An attractive dial thermometer is the costume jewelry of the refrigerating unit—and proof that the unit is doing its job right.

The thermometer illustrated is the Bi-metallic type, but special types and dials are available in quantity orders. No matter how unusual your design, Marsh engineers are ready to help you incorporate a thermometer that will add another effective talking point to your cold box. Write for further information today.

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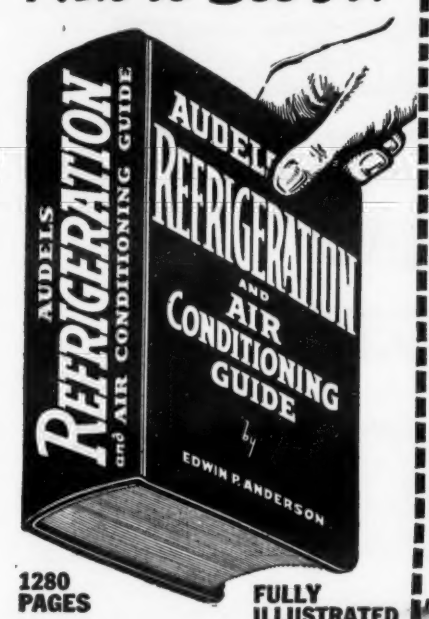

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What's New

New Harderfreez Farm and Home Freezer

Outside dimensions of the box: 58" long, 28" deep, 34" high, with top of compressor housing 34" high. Compressor called for is ¼ hp., air cooled.

* * *

COBLESKILL, N. Y.—Production of a new 12-cu. ft. farm and home freezer has been announced by Harder Refrigerator Corp. here.

Features of the locker are hermetic sealing of the rustproof steel outer shell, and the 5 inches of insulation all around.

Upright models will be built, with 15 and 21-cu. ft. capacities. The latter model can be obtained as a dual purpose cabinet, with 12 cu. ft. for frozen foods and 9 cu. ft. for normal holding temperatures.

The company also will make a small home locker plant, in reality a small walk-in cooler of about 190-cu. ft. capacity. Half of this will be for processing and storing frozen foods, the other half for normal refrigeration use.

Harder Refrigerator Corp. was purchased last November by Tyler Fixture Corp. of Niles, Mich. The principle of the all welded commercial steel box originated by the parent company is incorporated in the new Harderfreez unit.

Armstrong-Bray Has New Line of Wheel Pullers

CHICAGO—New line of refrigeration wheel pullers known as "Steelgrip" has been announced by Armstrong-Bray & Co. here.

The puller is available in either a two-arm (R-22) or three-arm (R-23) type, both types taking diameters up to 6 in. and reaching 5 in. from the end of the shaft. Arms and hubs are of special analysis steel drop forged. Arms of the three-arm puller are also counter-bored permitting them to be turned sideways to grip the spokes of flywheels.

Tubular Dustex, New Dust Collector, Announced

CHICAGO—Tubular Dustex, a new dust collector, has been developed and manufactured by the Dust Filter Co., 160 N. LaSalle St. here.

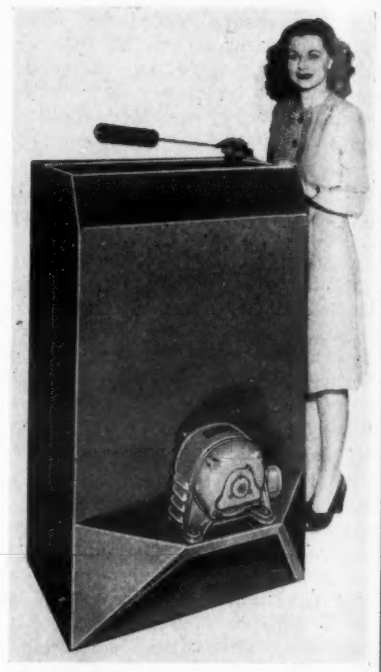
Coming in three sizes, all of them portable and self-contained, it is designed to meet the need for an efficient means of removing any kind of dangerous and obnoxious dusts from the air.

The large unit contains 60.8 square feet of filter surface space, and the smaller units are in proportion. This surface area lessens the volume of air drawn through any portion of the filter at one time thus preventing minute particles from filtering through. It also diminishes the static presure loss usually brought about by the impingement of the surface area by large quantities of dust.

Collector bags are not used in the unit. The filter surfaces are tubular in design and are bottomless. Dust filtered through them is collected in a pan at the bottom of the unit, which is shaken periodically by a hand-shaker.

The collector maintains a static air pressure of more than 4 inches at a velocity of over 5,000 LFM. It is completely fireproofed. Unit weighs from 150 to 250 pounds and are 36 to 48 inches high. Motors are AC ¾ and 1½-hp. 3 phase, 60 cycle.

* * *

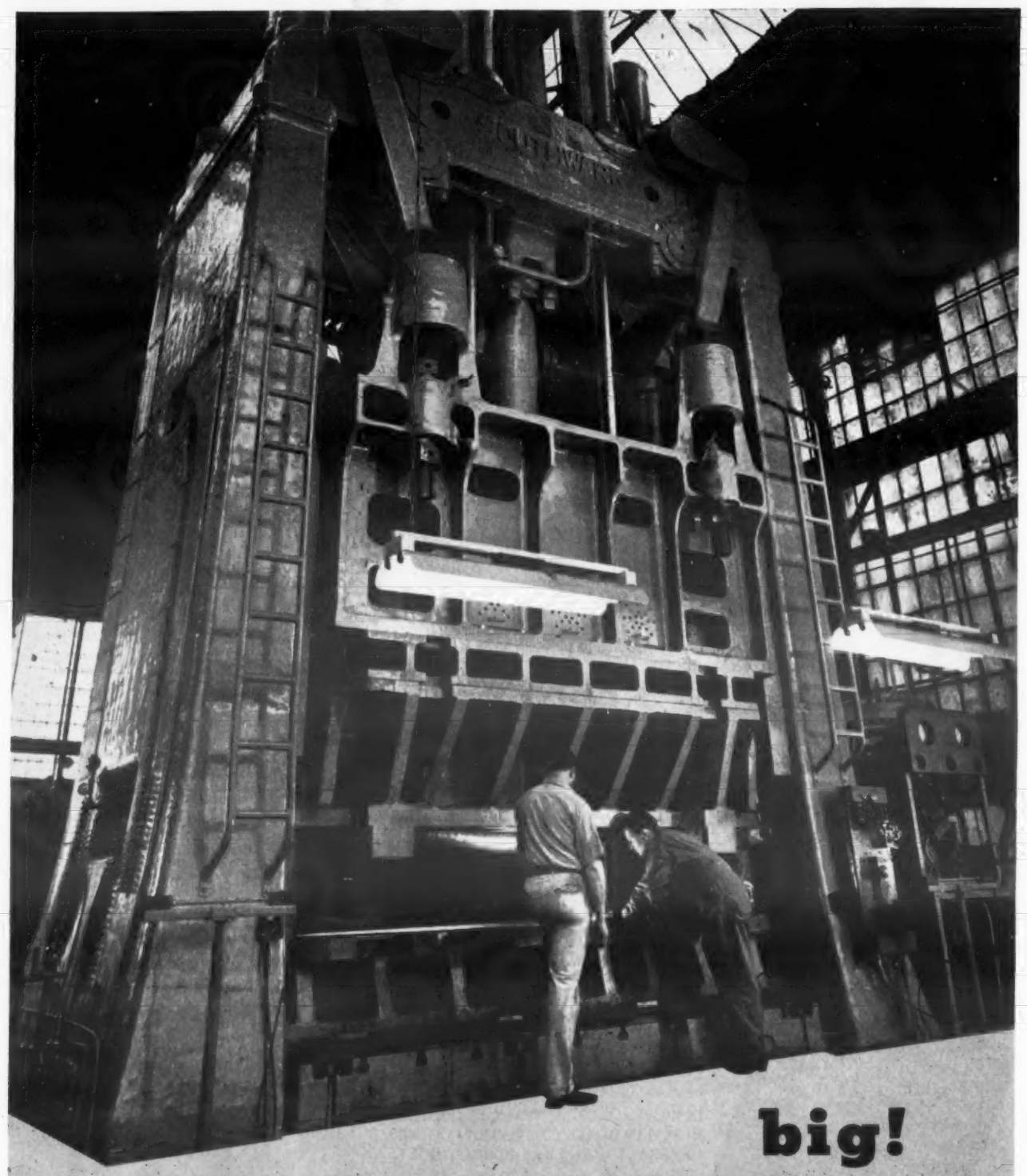


Tubular Dustex unit. Portable and self contained, it comes in three sizes.

Special Tag Will Identify 'Visoleak' Protection

LOS ANGELES—A special tag for use on refrigeration systems in which "Visoleak" has been installed is being distributed to refrigeration jobbers by the Western Thermal Equipment Co., producers of Visoleak.

When a system has been treated with Visoleak, any leaks which may develop are shown by red coloring, the company explains. Affixing the tag to the system at time of treatment warns owners, and maintenance and service men to act promptly when this evidence of leakage appears.



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THE COMPLETE LINE

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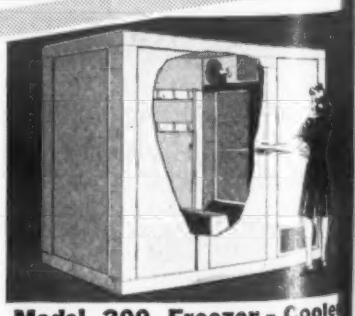

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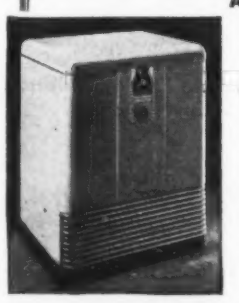
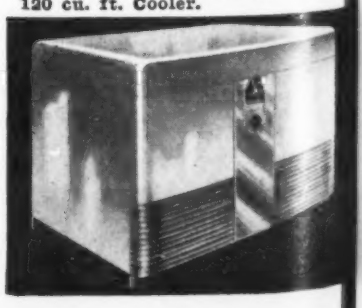
A complete private Locker Plant 23 cu. ft. sharp freezing capacity 120 cu. ft. Cooler.



Model 50
5 CU. FT. CABINET. Accessible . . convenient . . counter-balanced lid. No waste space.

Model 90
9 CU. FT. CABINET. Full view counter-balanced top. Contents easily accessible. 100% usability of storage space.



Weston Tells Appliance Repairmen How To Make Use of Ratings For Motors

Editor's Note: These excerpts from a talk by Mr. Weston before the Appliance Parts Jobbers Association give a lot of up-to-date information on the repair part situation in the electric washer field, and also provide some helpful information on obtaining fractional horsepower motors for repair and replacement purposes.

By Gerald W. Weston, Chief,
Electrical and Mechanical Repair Section, Service Trades Division,
Office of Civilian Requirements, War Production Board

In the summer of 1943, the Service Trades Division was formed in the Office of Civilian Requirements to protect essential civilian services, among which were electrical appliance repairs.

It became our object to try and remove every obstacle that prevented repairmen from devoting all of their time and energy to productive repair work. This caused us to be concerned with every control or regulation affecting the manufacture and distribution of repair parts.

The issuance of CMP Regulation 9A was one of the first major steps for repairmen. It has proved of great value to them with its assigned allotment symbol and preference rating, thus eliminating, in most cases, the filing of PD-1A and CMP-4B applications.

Here are some of the efforts made by WPB to improve the repair situation, with particular reference to washers and refrigerators.

WHAT HELP HAS BEEN GIVEN

WPB's Urgency Rating Committee approved the granting of AA-1 ratings on manufacturers' CMP-4B applications for use in getting refrigeration parts made. Previously AA-3 ratings were used. On distributors' WPB-547 applications, AA-2X ratings are being granted for parts and components in short supply.

Then for washer parts, the WPB, in the third and fourth calendar quarters of 1944 set up a dollar volume "kitty," against which washer manufacturers could draw an AA-1 rating on application for parts and components needing that rating instead of the usual AA-3 that they received on their CMP-4B applications.

In the third quarter 75% of the "kitty" was used; in the fourth quarter 46%. However, for some reason or other, in the first quarter of this year, the amount used was only 37.5% of the amount originally set up, and only 12 of the 30 washer manufacturers applied for the AA-1 rating.

The AA-1 "kitty," with a reduced amount, is established for the present calendar quarter with the qualification that the rating will not be granted for malleable or grey iron castings. But it will be possible to obtain some grey iron castings by an uprating on orders placed with a castings producer whose schedule is not frozen. The AA-1 "kitty" rating cannot be used to order fractional horsepower motors or gas engines.

Another major difficulty corrected was a restriction on the production of repair parts for a manufacturer's inventory. On L-6, the washer order, this restriction was liberalized last year.

HOW TO GET MOTORS

There are three channels of distribution for new motors for civilian replacement purposes. One is through the appliance manufacturers who receive substantial quantities of motors each month through ratings assigned on their CMP-4B applications. These manufacturers are acting as motor distributors, and deliveries of the motors are governed by WPB Order L-123. In a nutshell, an appliance manufacturer must have an AA-5 or higher rated order to deliver motors to a dealer or service shop. One exception to this is on exchange deals as covered in L-123.

A second channel is the extension of repair shop ratings by distributors to motor manufacturers.

The third channel of distribution is on WPB-547 applications filed by distributors. The regular procedure is to grant AA-2X ratings for the purchase of a specified number of motors to distributors having a motor sales pattern for the last normal year, such as 1942 or 1943. WPB-547 applications may be filed each month, and the amount allowed will be based on an approximate 30 day inventory, taking into consideration your deliveries from stock as shown on your application for a normal year.

However, as these motors are received and sold you may re-apply for additional quantities and your application will be given consideration. A good many thousand purchase authorizations are granted each month to distributors of various kinds, and those that started filing regularly some months ago are now getting motors.

On March 10, 1944, a WPB press release was issued urging jobbers needing motors to file applications for them. Another press release was issued Dec. 13, 1944. This emphasized the importance of filing regularly each month.

REPAIRMEN LACKADAISICAL

Just recently, I checked the 1944 records of applications to see to what extent your member firms had been filing. I picked 27 of your 40 firms at random. Two firms filed once, and one firm filed three times. The two were granted purchase authorizations for 75 and 20 motors; the firm filing three times received a total of 74.

Not many, but better than none. Enough, probably, with the use of rebuilt motors, to help some families out of real washing trouble—perhaps save the time of some workers doing important war work, for it is generally recognized that difficulties in keeping family clothes clean has been one of the factors in absenteeism from war work.

Several questions are in order for those of you who have handled motors in the past. Did you extend AA-3 rated orders from repairmen for motors; then on being given, say, 10 months delivery, get discouraged and say, "What's the use?"

Is it too much trouble to file each month a WPB-547 application for an AA-2X rating with approval to purchase a certain number of motors? Or are your service customers getting along well enough with rebuilt and rewound service so you don't have to bother about filing applications?

Sources of new motors for repair shops are distributor or jobber suppliers of various kinds, motor dealer agencies, and the large mail order firms. Washer and domestic refrigerator repair shops may use the AA-3 rating of CMP Reg. 9A. Commercial refrigeration repair shops may use the proper rating of P-126.

DISTRIBUTION POLICY AND WPB

The problem of distribution has its interesting angles. Your advertising, which is well done, stresses the value of a one-stop buying place for repairmen. Obviously, that has advantages, especially in these days of gas and tire shortages, unprecedented work load on repair shops, manpower shortages, and some waste of time and effort in extra trips to customers' homes and in hunting around for repair parts.

Some manufacturers try to confine their distribution of parts to their factory branches; others to distributors with whom they have dealt for years. This presents a problem for independent repairmen who offer to repair almost any make of washer. There is something to be said on both sides of this question.

The WPB policy, as stated in some of the regulations, is as follows:

"It is the policy of the War Production Board that ( ) described in this order not required to fill rated orders shall be distributed equitably. In making such distribution, due regard should be given to essential civilian needs, and there should be no discrimination in the acceptance or filling of orders as between persons who meet the seller's regularly established prices and terms of sales or payment. Under this policy every seller of ( ), so far as practicable, should make available an equitable proportion of his merchandise to his customers periodically, without prejudice because of their size, location, or relationship as affiliated outlets. It is not the intention to interfere with established channels and methods of distribution unless necessary to meet war or essential civilian needs. If voluntary observance of the policy outlined is inadequate to achieve equitable distribution, th War Production Board may issue specific directions to named concerns."

FROM THE SERVICE MAN'S ANGLE

HERBERT FRAME, Public Service Co., Baltimore, Md., says:

"DAVISON'S Silica Gel gives us something you can't overlook in this business—CUSTOMER SATISFACTION"

"Further," says Mr. Frame, "we've been in business long enough to have tried practically every drying agent on the market and none of them gives the combination of advantages that Davison's gives us. Removing moisture is one thing—but HOW a drying agent does it and what it does besides removing moisture are other things we must consider. And when you consider them all—there's only one answer—

USE DAVISON'S AND BE SURE!"

Processed especially for the dehydration of refrigerants. Gives you—1–Maximum capacity that is not affected by oil; 2–Instant action; 3–Removal of Acids and Corrosive Compounds; 4–Freedom from Channelling of Refrigerant; 5–Safety—it will not attack metals or alloys.

Order Davison's Silica Gel from your jobber—in factory-charged dehydrators & for refilling

CURTIS BAY WORKS

THE DAVISON CHEMICAL CORPORATION

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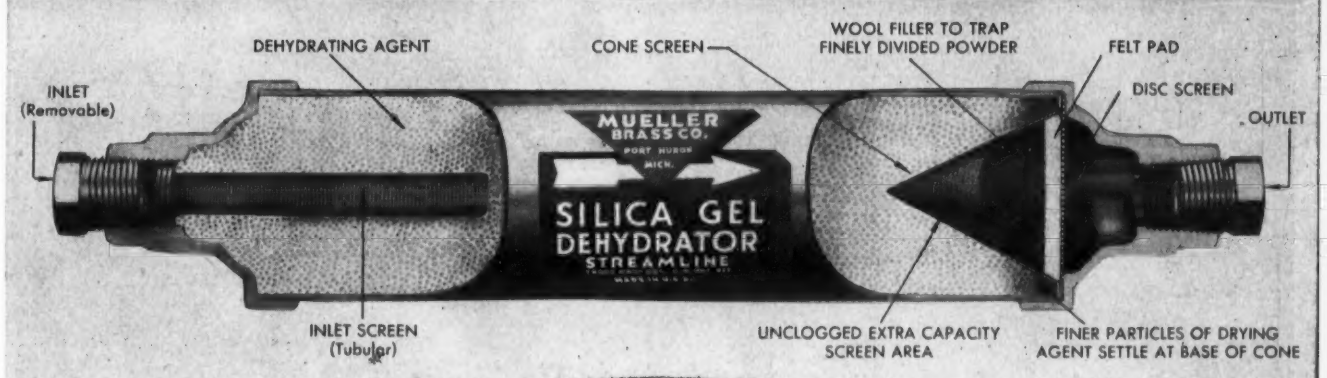
BALTIMORE-3, MD.

Canadian exclusive sales agents for DAVISON'S SILICA GEL:
CANADIAN INDUSTRIES LIMITED, General Chemicals Division

Here is the New MUELLER BRASS CO.

REFILLABLE DEHYDRATOR



Readily Removable Inlet For Easy Refilling!

When recharging our new Dehydrator, simply remove the inlet plug—back out the slotted inlet screen tube—shake out the exhausted agent, then replace with new.

In addition to this convenient feature (see illustration above) Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.

Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.

With the MBCO. CONE SCREEN OUTLET, such finer crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.

In adddition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.

Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.

MUELLER BRASS CO. PORT HURON, MICH.

OASIS Electric Water Coolers

IT COSTS SO LITTLE to have healthfully cooled, clean water always on tap, day in and day out, when you install OASIS coolers! Years of satisfactory "thirst-aid" under all conditions have proved the care-free dependability and low-cost efficiency of OASIS coolers. Their trim beauty, rugged-ness, space-saving compactness, extra cooling capacity, and splash-free, "angle-perfect" bubbler action have won *wide* preference. Every Oasis is backed by Ebco's 20-year record of pioneering leadership in electric water cooler design and manufacture. It pays to beat thirst with OASIS.

THE EBCO MANUFACTURING COMPANY
401 W. Town Street Columbus 8, Ohio

Modern Refrigeration Systems Permit Fresh Food Meals on Troopships

Far Different From Anything Before; Meats Kept Frozen; Chilled Drinking Water Is Vital

AT SEA—SOMEWHERE IN THE PACIFIC—Splendid meals served to U. S. Army officers and men traveling aboard Navy operated troopships are made possible by the high standards of food quality maintained at the time of purchase, skilled handling and preparation of meals, and by modern refrigeration systems. Without refrigeration, the meals served aboard a troopship might be a very sorry affair indeed, made up for the most part of canned produce and bully beef; with refrigeration, the "chow," as it is known to the military, is excellent and constitutes a well balanced diet.

Under the Navy system, all meals served aboard ship are in charge of the Supply Officer, in this instance Lt. Edward Oliver, who was formerly connected with the Apparatus Division of General Electric Co., in New York. Lt. Oliver is one of several hundred Navy supply officers who handle the complex problem of buying food and supervising its preparation for troops and Navy personnel during the voyage.

In the first place, all meat, produce, and perishables purchased by the Navy are of top quality. Apples from Oregon, that are a welcome addition to many meals, do not have a blemish. Oranges from California and Florida, beef from Texas, and seafoods from the Eastern seaboard are all of top quality, and are the finest obtainable.

Out here in a climate where oranges removed from refrigeration will grow a thick coating of mold in just a few hours, where wrist watch straps rot in two, and where fungus grows on the human skin, the importance of adequate cold storage facilities cannot be over-emphasized.

Food kept under refrigeration on board is divided into three classifications; produce, kept at 38° to 40° F.; dairy products, kept at approximately the same temperature; and frozen foods, including all meats, which are maintained at approximately 15° F.

A TYPICAL MEAL

A typical meal served on shipboard would include roast beef (frozen), peas (frozen), potatoes, fresh carrot and apple salad, and celery, all from the produce refrigerator, ice cream, made on board, and cookies.

Cold lemonade served with dinner, or cold orange juice served at breakfast, is cooled by placing it in milk cans and storing these in the frozen food compartment a few hours before serving, as there are no ice making facilities on this particular ship.

Water coolers, in this case Sunrock, built by Morrison, Glen Riddle, Pa., are an important and welcome part of the vessel's equipment. Located in ward rooms, troop compartments, and in mess halls, they are readily available to all hands at all times.

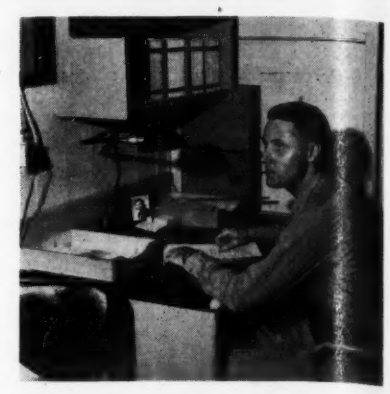
DRINK AND MORE DRINK!

In spite of the fact that most individuals drink phenomenal quantities of water every day, it is very easy for it to become badly dehydrated, which, along with loss of salt from the body, has an enervating effect on the entire system. Cold water and salt tablets offer the best possible antidotes for this situation.

Refrigeration is also used on shipboard to keep meat prior to cooking in the galley, for the preservation of medicines in sick bay, and for cooling photographic solutions in the dark room, the latter having a built-in liquid cooling system for developing and fixing tanks. The galley employs a reach-in refrigerator, the sick bay a household refrigerator, and the dark room system uses a G-E fractional horsepower compressor. Another household box is used for supplies in the ship's officers' wardroom.

The three large walk-in refrigera-

(Concluded on Page 25, Column 3)



The Supply Officer (in this case Lt. EDWARD OLIVER, formerly with G-E) is in charge of provisioning a ship and supervising preparation of meals.

Supplies are taken from one of the coolers. Note the temperature indicator over the door.

for

REFRIGERATION SERVICEMEN

that is full of helps—with do's and don'ts to make his work easier. Send for your copy.

WOLVERINE TUBE

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"RECOLD"
WATER DEFROST

'RECOLD' COILS WATER-DEFROST
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REFRIGERATION ENGINEERING Inc.
LOS ANGELES • CALIFORNIA

FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates-American Machine Co. Beloit, Wis.

Kipman
AUTOMATIC REFRIGERATION

Want Refrigerator
ALSO WASHING MACHINE.
PLEASE CALL MRS. KIRSCH
BITTERSWEET
IF THE PART YOU WANT
can be had...you can get it at..
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1728 S. Michigan Ave. Chicago, 16, Ill.
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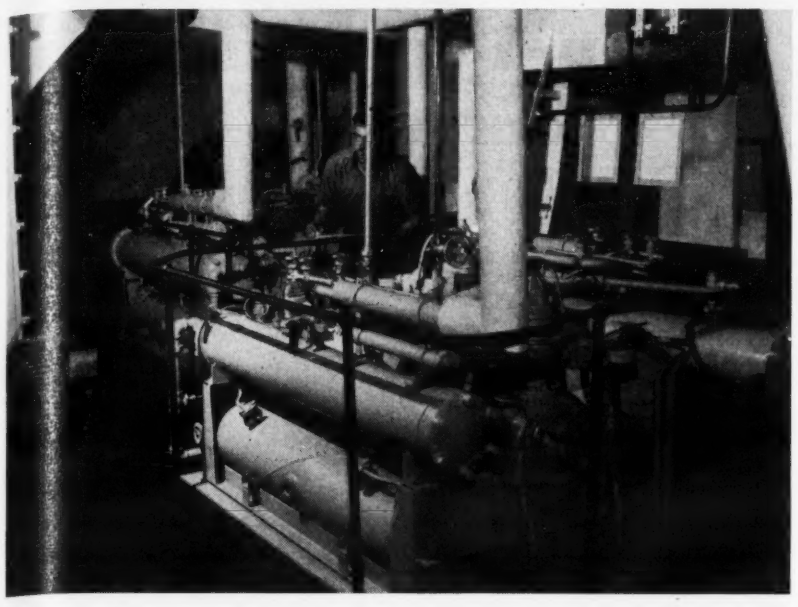
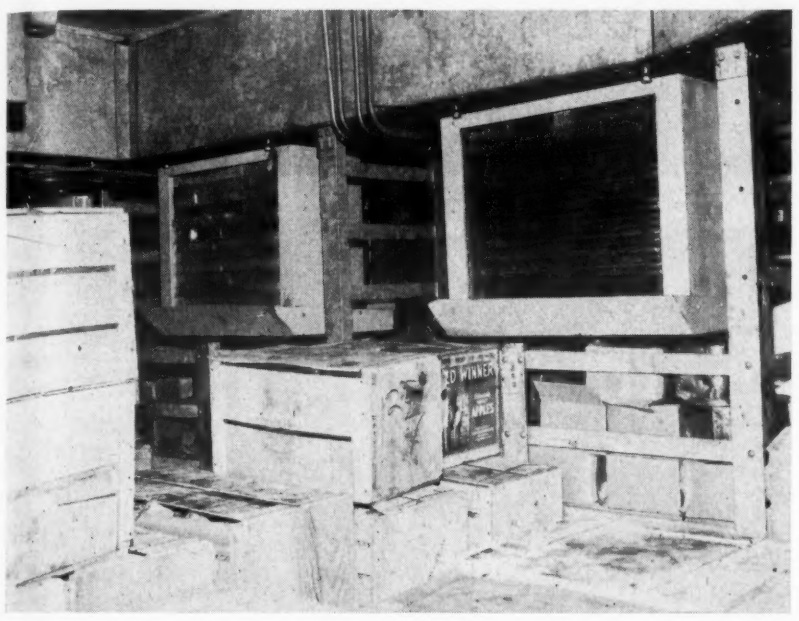
This Is How Troops Get Fresh Food on Shipboard



These direct expansion refrigerating machines, neatly installed (note guard rails) in their own engine room, are the key to the safe, efficient systems that make possible fresh food diets for soldiers being transported to the Pacific.



Fresh fruits and vegetables are piled high in the produce storage room, protected by refrigeration supplied by the blower type coolers shown in this picture.

Direct Expansion Systems Simplify Problems on Ship

(Concluded from Page 24, Column 5)

tors that constitute the ship's stores are operated by three direct expansion refrigeration systems, one serving each compartment. The produce box and dairy box have 7½-hp. compressors, each operating two large blower coil units, and the frozen food compartment is equipped with a 10-hp. machine which expands "Freon" through piping in the walls and across the ceiling of the insulated room.

Produce and dairy boxes are also equipped with pipe coils, so they may be converted to frozen food storage space when necessary. Although the Navy buys numerous makes of refrigeration, the compressors on this vessel are General Electric.

The simplicity of the direct expansion "Freon" system is a far cry from the complex indirect brine cooling ammonia system employed in World War I. At that time compressors had to be installed on deck to prevent disaster in case of damage to the ammonia piping.

On this vessel the refrigeration compressors, which include an extra stand-by machine, are housed in the engine room, surrounded by a neat railing which encloses the complete units and their condensers.

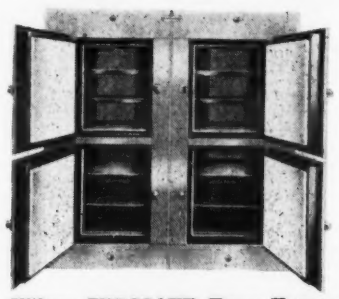
While standard thermostats and back pressure controls are incorporated in the low pressure systems, making them fully automatic, members of the crew take temperature readings from thermometers mounted outside of the reefer boxes every few hours.

Doors are only opened when it is absolutely necessary, as the inrush of hot moist air causes moisture to condense on the ceiling pipes, which quickly drips to the floor. To offset this condition, produce is stored on a steel grating across the floor of the box, and the reefers are equipped with suitable drains.

Blood plasma is carried in the ship's dairy refrigerator.

THE RESPONSE HAS BEEN TERRIFIC . . .

WILSON ZEROSAFE



Wilson ZEROSAFE Farm Freezer
Model FF-60 (Cap. 60 cu. ft.)
Self-Contained Models:
Up to 25 cu. ft.
Sectional Models: Up to 100 cu. ft.

1. From 1939 up to the time government limitation became effective, Wilson Reach-In Farm Freezer production was doubled and redoubled to meet rapidly growing demands.
2. All of the experience gained in years of designing and manufacturing Wilson ZEROSAFE is going into the production of this equipment on a huge new production schedule when the "green light goes on."

WILSON CABINET COMPANY
COMMERCIAL REFRIGERATION EQUIPMENT
SMYRNA DELAWARE

WILSON ALSO MAKES . . .
ZERO-FLOW and VERTI-COIL Milk Coolers
ZEROVAULT Walk-Ins for Frozen Food Storage
ZEROSAFE Reach-Ins for Storing and Dispensing Frozen Foods
NORMAL TEMPERATURE Walk-Ins & Reach-Ins

ACCURACY of CONTROL

★ is not affected by

Temperature Changes in Surrounding Areas

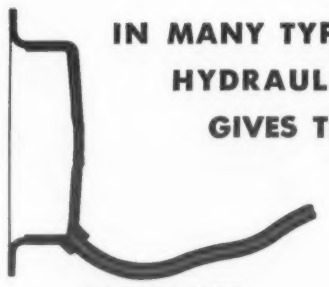
WHITE-RODGERS HYDRAULIC-ACTION REMOTE BULB CONTROLS ARE *NOT AFFECTED BY CHANGES* IN ROOM TEMPERATURE

When controls must be located under difficult conditions, the remote bulb and capillary of White-Rodgers Hydraulic-Action controls provide the answer. The fluctuating temperature of the area in which the control is located *does not affect* the operation of the control. The design of the sensitive element, together with the expansive force of Hydraulic-Action, make this possible.

8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

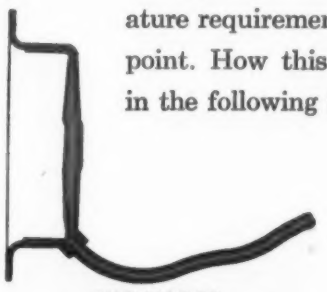
1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action principle incorporating solid-liquid-filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
4. Power of solid-liquid charge permits unusually sturdy switch construction resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power.
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
★ 7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

IN MANY TYPES OF APPLICATION THIS HYDRAULIC-ACTION PRINCIPLE GIVES THE ONLY SURE RESULT



CONTRACTED

Above is a cross section of the diaphragm and part of the liquid-filled capillary. In this view the liquid has contracted, releasing the pressure on the diaphragm and causing the switch contacts to function.



EXPANDED

In this cross-sectional view, the liquid charge of the capillary has expanded with a rise in temperature. The positive force of this hydraulic action forces the diaphragm outward and causes the switch contacts to function.

The remote bulb, containing the major portion of the solid-liquid charge, fully interprets the temperature requirements of the control point. How this works is shown in the following illustrations.

Actual-size illustration of the White-Rodgers diaphragm body, the actuating element of every White-Rodgers temperature control. It is so designed as to exert full pressure at the point of contact with the switch mechanism.

WHITE-RODGERS ELECTRIC CO.
1211E CASS AVENUE ST. LOUIS 6, MISSOURI
Controls for Refrigeration • Heating • Air-Conditioning

About Returning Empty Cylinders

-as Uncle Sam might say it...

"They call me 'Uncle' Sam. But, I am not an Uncle at all. I am you. I am *every* American. That makes my problem your problem — and your problem mine. Listen:

"War creates new problems which cannot be solved without cooperation. Here's one: Refrigerant manufacturers have been urged to deliver increased quantities of refrigerants. To do the job, they need thousands of additional steel cylinders. But, steel is vital to our boys in stopping the enemy!

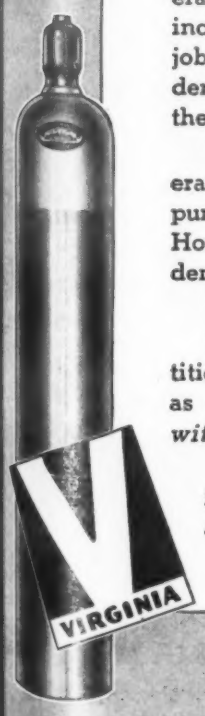
"Because our fighting men come first, refrigerant manufacturers have been permitted to purchase only a limited number of new cylinders. How, then, can they supply the heavy summer demand for vitally needed refrigerants?

"Brother, that's where you come in!

"Here's how: First, buy refrigerants in quantities you can use within 30 to 60 days. Second, as soon as containers are emptied *return them without delay to the refrigerant manufacturer.*

"See what I mean? We've got to keep existing cylinders at work all the time! You are an American — and I'm counting on you.

"Let's do the job!"



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76 BEAVER STREET, NEW YORK 5 :-: 131 STATE STREET, BOSTON 4
Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"

This GRUNOW SEAL

in your Telephone Directory
will make you MONEY

● This Grunow Authorized Service Seal is one sure road to high profits in the refrigeration service business. This sign, plus genuine parts will produce business which will surprise even the most skeptical service man.

You'll gain customer confidence; eliminate "call-backs"; cut service time.

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FACTORY TESTED PARTS

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BACK THE ATTACK . . . . . BUY MORE WAR BONDS
★

G.I. and Friend

There's something characteristic, and symbolical we think about this picture of a lone G. I. and his friend the Inland-made M-1 Carbine.

This little .30 calibre carbine is a typical G. I. gun. Easy to know, light, maneuverable and deadly accurate, it's been a trusted fighting companion to countless G. I's under all kinds of battle conditions.

There's something symbolical about the remarkable production of this Inland-made carbine in accelerating quantities by men and women who before the war were neither gunsmiths nor makers of military precision mechanisms. It indicates what versatility and initiative in engineering and manufacturing can accomplish when combined with the willing work efforts of people unafraid to face new problems and acquire new skills.

Inland's achievement, in collaboration with the Small Arms Branch of the Army Ordnance Department, in carrying the carbine from design to quantity manufacture has been widely recognized. However, we believe, that its greatest tribute comes from the countless G.I.'s who know it as a good friend in time of need.

KEEP ON BUYING WAR BONDS

INLAND MANUFACTURING DIVISION
General Motors Corporation Dayton, Ohio

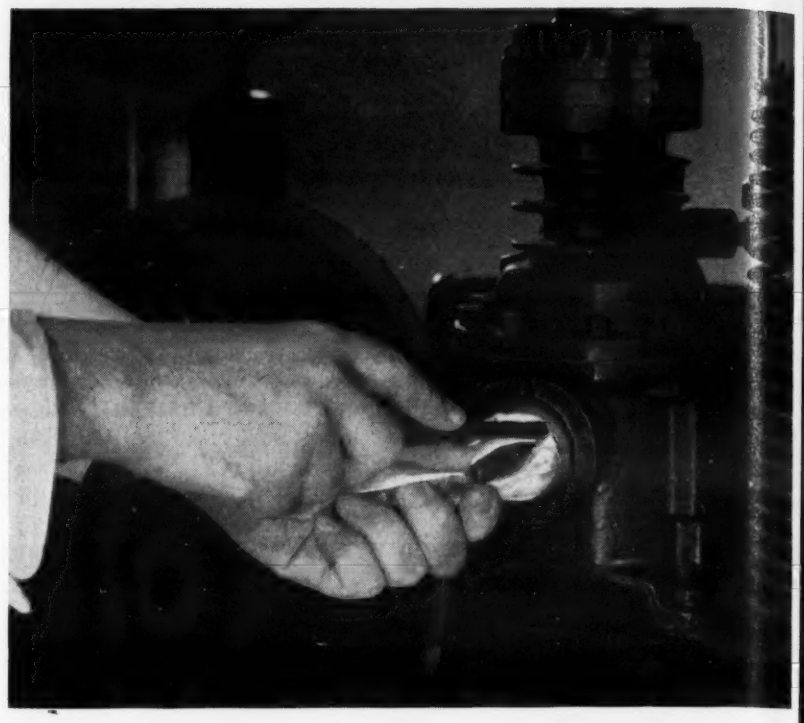
Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.

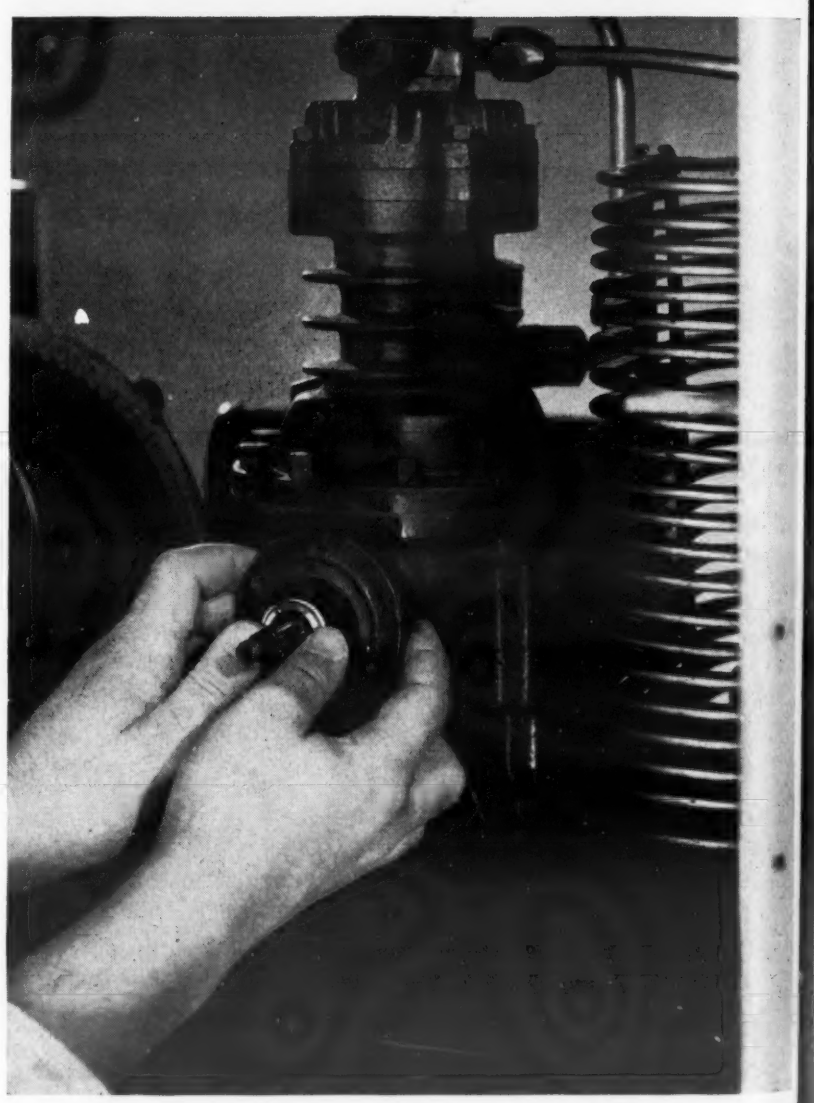
INLAND Manufacturing
RUBBER, METAL, PLASTICS

Servicing Frigidaire Open-Type Systems

Instalment No. 10

39—Installing Nitralloy Ring





Then clean crankshaft shoulder and install nitralloy ring. It is very important to clean the crankshaft shoulder thoroughly, being sure to remove all oil and sediment that might be present. This cleaning can be done as shown by working a clean cloth around in the recess against the crankshaft shoulder. Just be sure not to leave any lint from the cloth.

As for installing the nitralloy ring, this is done because the new type seal and ring are required to replace the old type seal. If the seal being replaced is the new type, examine the nitralloy ring and re-use it if its condition permits. Otherwise, of course, a new ring will have to be installed.

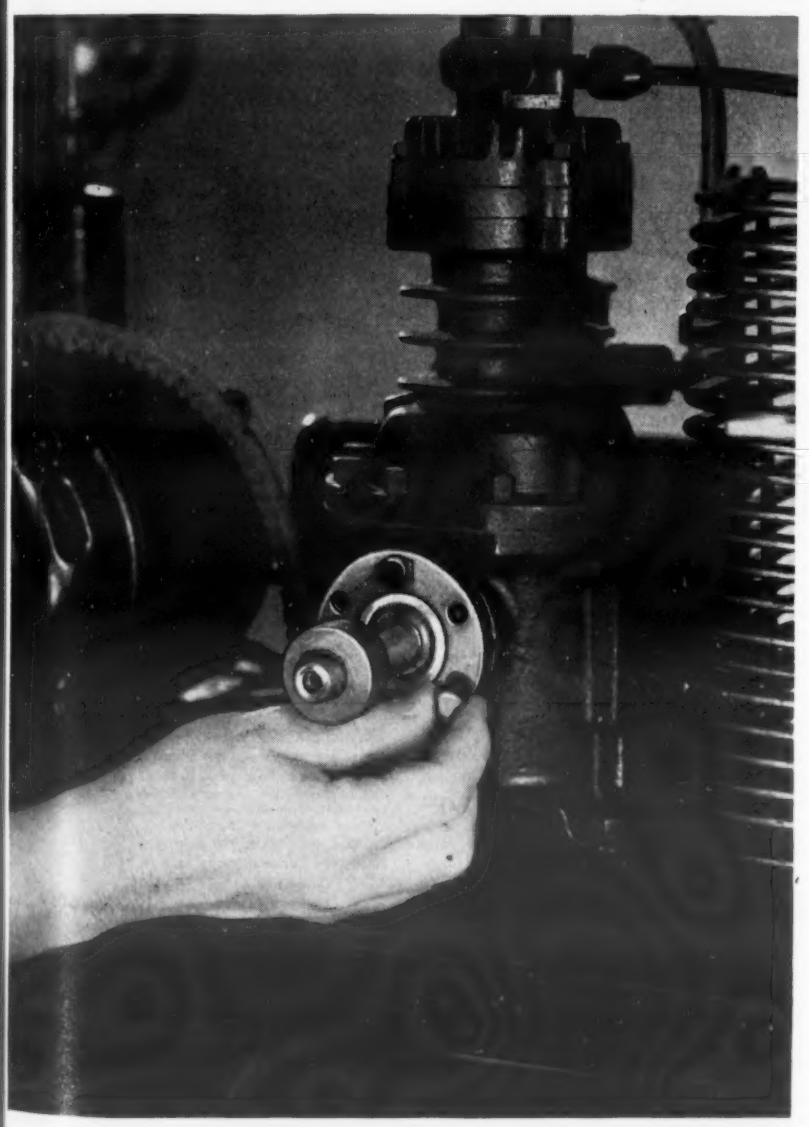
Ask Your Jobber for
HASCOBILT *Parts*
SUCTION *and* DISCHARGE VALVE, DISC, REEDS *and* SPRINGS
for Conventional and Hermetic Type Compressors
HASCO, INC.
GREENSBORO, N. C.
If your jobber can't supply you, send for illustrated catalog and price list.

Servicing Frigidaire Systems

40—*Installing New Seal*

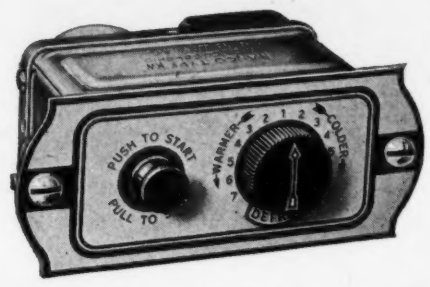
Now dip new seal in clean Frigidaire oil. This precaution provides initial oiling until such time as the regular splash lubrication is provided.

Next, use centering tool to install seal, thus insuring the accurate alignment of the seal against the nitralloy ring. This tool also serves as an aid in installing the bolts on the retainer plate.



As is indicated in the illustration, when an old type seal has been removed, it will be necessary to exchange the old replaced retainer plate with a newer type. Having done this, reinstall the flywheel, put on the belt, open the compressor valves, and test for leaks.

Ready for the Annual SUMMER RUSH?



Ask your Ranco Jobber to show you these and other Ranco domestic and commercial replacement controls.

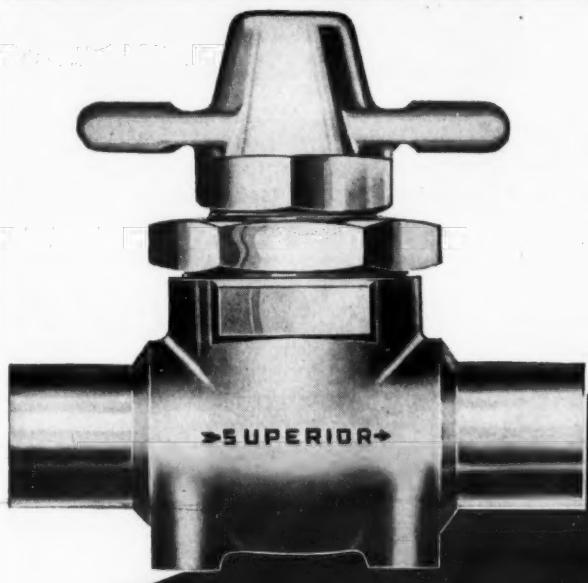
When the temperature begins to soar and equipment is taxed, the service engineer is apt to find himself flooded with calls. That is the time to standardize on the RANCO KWS line of replacement controls for speedy installations you can be proud of—in ice cream cabinets, water coolers, domestic refrigerators, etc. KWS features include: beautiful stainless steel case; single pole, snap action switch; outside service indicator for limited range adjustment; outside differential adjustment; user adjustment; push-pull off-and-on switch; adjustable mounting brackets; overload mechanism.

Ranco Inc. COLUMBUS 1, OHIO

★

BACK THE 7th WAR LOAN . . . BUY MORE WAR BONDS

★



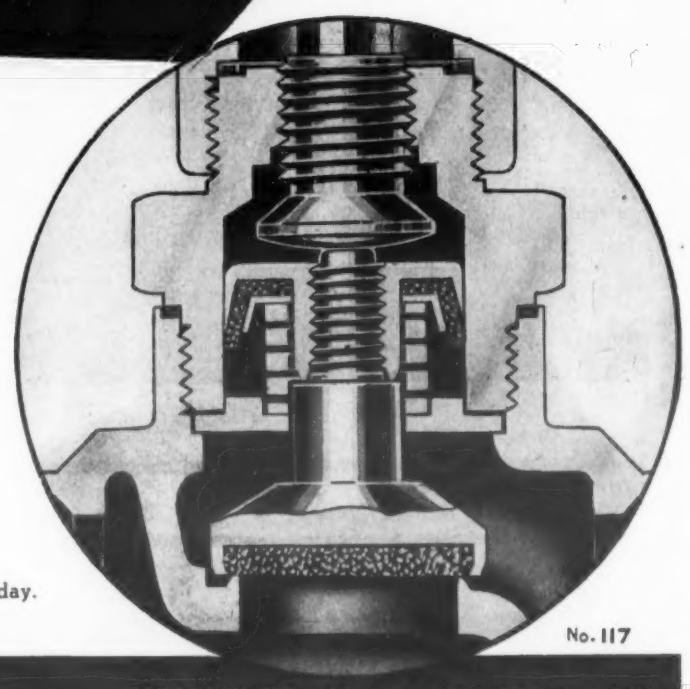
Superior PRESSURE CUP VALVES THE *Inside* STORY

The skirt of the pressure responsive cup—acting like the piston in an automobile tire pump—automatically forms a positive pressure seal, with the valve stem in *any* position. Eliminates packing "drag" and leaks prevalent with conventional packed valves.

. . . and that's not the *only* feature of these SUPERIOR Pressure Cup Valves!

- Seal-cap gasket assures pressure-tight joint.
- Pressure responsive cup forms positive seal.
- Metal-to-metal backseat when valve is fully opened.
- Wrench flats for easy removal of internal assembly.
- Spring assures positive opening under pressure.
- Generous openings assure against pressure drop.
- *Available in sizes through 2⅛" sweat nd and 2" F.P.T.*

If you haven't a copy of Catalog R2, request one today.



No. 117

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HOWELL ELECTRIC MOTORS COMPANY · HOWELL, MICH. · REPRESENTATIVES IN ALL PRINCIPAL CITIES

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● Users of the Niagara AERO EVAPORATIVE CONDENSER have saved up to 35% of power while increasing useful refrigerator capacity obtained without increasing compressor equipment. This has been achieved by reducing compressor head pressure.

Only the Niagara DUO-PASS Aero Condenser assures these gains because only the Niagara Condenser has the patented DUO-PASS which lowers temperatures so that no deposit of salts or scale is precipitated on the condenser tubes. This improvement secures the full capacity of the evaporative condenser throughout its long life.

The Niagara DUO-PASS AERO CONDENSER also saves the user the cost of 95% of his condensing water and the installation expense of water-handling equipment. For complete information and records of users' savings, write to

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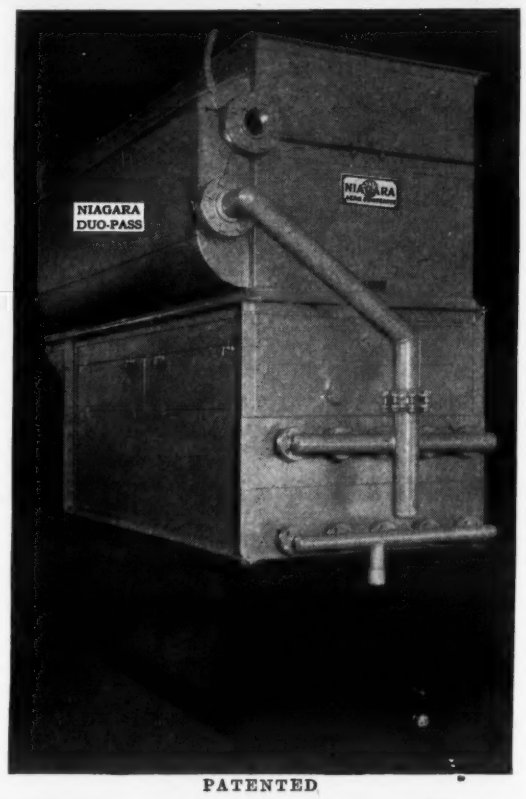
Field Engineering Offices in Principal Cities



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3 PIECES (EACH REPLACEABLE)
ASSEMBLY WITHOUT SPECIAL TOOLS. NO TIGHTENING OR ADJUSTMENT AFTER ASSEMBLY. FITTINGS CAN BE REMOVED FROM HOSE AND RE-USED OVER 100 TIMES.

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Radio Repair Work Expansion Likely In Postwar Period

PITTSBURGH — Postwar radio service business will offer a challenging combination of expanded opportunities and stern responsibilities in the opinion of Harold W. Schaefer, assistant manager of the Westinghouse home radio division, which will manufacture and market radio and television receivers after victory. He estimates that the service business will hit $55,000,000 during the first peacetime year.

Speaking before a recent meeting of the Philadelphia Radio Service Men's association, Mr. Schaefer, who is in charge of home radio engineering and manufacture, declared:

"Surveys indicate that manufacture of civilian radios will not meet demand for the first few postwar years, and that about seven and a half million repair jobs—representing approximately $55,000,000 worth of service business—will be required to keep the nation's radio sets in operation during the first year alone.

NEW SET INSTALLATIONS

"In addition to this maintenance there will be the all-important job of installing new FM and television sets; and it is in these installations, more than in any other postwar activity, that the service man can be of lasting benefit to the radio industry.

"Such installations, properly made, will contribute much to the general and rapid acceptance of these newer radio developments while unsatisfactory installations will retard acceptance by fostering doubt as to their worth and reliability."

"Postwar FM and television will make more exacting demands on both the manufacturers and the service men," Mr. Schaefer continued. "Because they operate at much higher frequencies than ordinary AM radio, the technical problems of each are greatly increased. This is particularly true of television, since the definitions of sight are greater than those of hearing."

ANTENNA IS THE KEY

Calling proper antenna installation the one greatest contributing factor to good FM and television reception, Mr. Schaefer said:

"Strict attention to these installations will save the postwar service man a great many headaches, and they should be of little trouble even in view of the contemplated shift from the 42-50 megacycle band to the 84-102 mc band.

"In many locations the set's regularly built-in antenna will provide excellent reception. However, in less favorable places it will be necessary to go to outside dipole antennas and, in particularly unfavorable spots, to beam antennas."

Important as they are to FM, antenna installations are even more important to television if reception is to be at its best, Mr. Schaefer declared. "Every television receiver must have a good antenna system. Often this will require special filters to eliminate electrical interference, or particular placement to cut down reflections."

Refrigerated Boats Bring New Phase To Hawaii Fish Industry

HAWAIIAN ISLANDS (Special)—Launching of the *Tiger*, modern refrigeration equipped fishing craft here recently, is an important step toward the revival of Hawaii's dormant fishing industry. Owned by the Oahu Fishing Co., the new vessel is the first "haole-style" (foreign type) commercial fishing boat to operate in these waters. Most fishing boats used here are sampans.

The company, whose president is Richard Kimball, designed the *Tiger* to be a mother ship of a fishing fleet that will be launched at some later date.

Having special refrigeration equipment, it will daily transport fish caught off the Kona coast of the Big Island (Hawaii proper) to the local retail market. Having the refrigerated boat available eliminates the necessity of dealing through middlemen, as has heretofore been the practice.

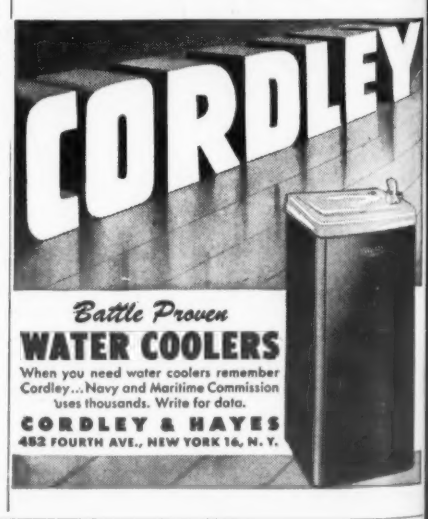
The *Tiger* is 48 feet long with a 13-foot beam and is about 10 tons. Cooking and galley refrigeration equipment makes it possible to sleep and feed a crew of eight.

Officers of the company point out that fresh fish has been a scarce commodity in these parts for the past three years, since most fishing was stopped for reasons of military security.

In the last year, with certain limited relaxing of restrictions, the industry has been reviving slowly despite increasing demands for a new island food supply and new local industry. It is expected that the launching of the *Tiger* will lead the development of a new and important Hawaiian fishing industry.

ELECTRICAL ENGINEER

to head electrical division of Engineering Department of nationally known refrigerator manufacturer. Must be able to handle development work, design, and solution of electrical problems on fractional HP motors, thermostats, relays, and other electrical devices. At least five to ten years experience in this field required. State qualifications and experience. Box 1726, Air Conditioning & Refrigeration News.



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WATER COOLERS
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Refrigeration and air conditioning products backed by 26 years experience.

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FORCED CONVECTION UNITS
PIPE COILS

Write for Catalog on any item.

ACME INDUSTRIES
JACKSON · MICHIGAN

AMC Buying Hit--

(Concluded from Page 1, Column 2)

allowances and discounts on purchases of merchandise for their respective stores.

In one year the combined sales of the stores approximated $425,000,000, and, according to the Commission's findings, about 25% of all the merchandise handled by the stores is purchased by or with the aid of A.M.C. Respondent members of A.M.C. are:

Abraham & Straus, Inc., Brooklyn; L. S. Ayres & Co., Indianapolis; Bloomingdale Bros., Inc., New York; The Herzfeld-Phillipson Co., Milwaukee; Bullock's, Inc., Los Angeles; Burdine's, Inc., Miama, Fla.; The Dayton Co., Minneapolis; The Emporium-Capwell Co., San Francisco and Oakland, Calif.; Wm. Filene's Sons Co., Boston; B. Forman Co., Rochester, N. Y.; Joseph Horne Co., Pittsburgh; J. L. Hudson Co., Detroit; Hutzler Brothers Co., Baltimore; The F. & R. Lazarus & Co., Columbus, Ohio; The Rike-Kumler Co., Dayton, Ohio; The John Shillito Co., Cincinnati; Stix, Baer & Fuller Co., St. Louis; Strawbridge & Clothier, Philadelphia; The Wm. Taylor Son & Co., Cleveland; Thalhimer Brothers, Inc., Richmond, Va.; and R. H. White Co., Boston.

The Commission's findings are in part as follows:

Generally, the special and discriminatory allowances or discounts granted to A.M.C. take the form of rebates on purchases by the respondent members for their respective stores during a specified period, usually a year. At the end of the period the seller pays the rebate to A.M.C. based on the total aggregate purchases of its merchandise by all the stores. A.M.C. then distributes the rebate to the stores according to the amount each has purchased from the particular seller during the specified period.

Those sellers who pay the rebates are designated by A.M.C. as "preferred resources," and as an inducement for such discriminations in prices A.M.C. continuously requests and attempts to influence its members to confine all of their purchases to the preferred resources. As a further inducement and in consideration of the discriminatory prices granted, the respondent members give preference in their stores to merchandise purchased from preferred resources and do not "push" the resale of goods bought from other sources.

Although other department stores may buy merchandise from a particular preferred resource in an amount as great as or in excess of that of a competing store of a respondent member of A.M.C., nevertheless they are not granted any similar price or discount on their purchases.

The Commission ordered A.M.C. and its members to cease and desist from:

1. Knowingly inducing or receiving any discrimination in price through or by means of discounts, rebates, or other allowances on purchases from any manufacturer or seller greater than the discounts or other allowances currently allowed by such manufacturer or seller to competitors of respondents, or any of them, for merchandise of like grade and quality.

2. Knowingly inducing or receiving any discrimination in price from any manufacturer or seller by means of discounts, rebates, or other allowances based upon the total purchases of the respondents as a group, by or through respondent Associated Merchandising Corp. or by any other means, which are not currently allowed by such manufacturer or seller to the individual competitors of respondents, or any of them.

3. Knowingly purchasing from any manufacturer or seller at prices lower than the prices currently charged by such manufacturer or seller to competitors of respondents, or any of them, for merchandise of like grade and quality.

4. Using collective action, in connection with the purchase of merchandise, for the purpose and with the result of inducing any manufacturer or seller to allow any discount, rebate, or other allowance higher than, or price lower than, that allowed by such manufacturer or seller to competitors of the respondents, or any of them, when such allowance results in the receiving of a discrimination in price by the respondents, or any of them.

5. Inducing any manufacturer or seller, by or through any of the following means or methods, to allow any discount, rebate, or other allowance higher than, or price lower than, that allowed by such manufacturer or seller to competitors of respondents, or any of them, when such allowance results in the securing of a discrimination in price by the respondents, or any of them:

a. By employing or utilizing respondent Associated Merchandising Corp. or any other medium or central agency as an instrument or vehicle or aid in inducing manufacturers or sellers to allow such higher discounts, rebates, or other allowances or lower prices.

b. By giving preference, either directly or through the respondent Associated Merchandising Corp. or any other agency, to those manufacturers or sellers who grant such discriminatory prices.

c. By refusing directly or through the respondent Associated Merchandising Corp. or any other agency to purchase merchandise from those manufacturers or sellers who refuse to grant or who refrain from granting such discriminatory prices.

d. By offering or agreeing to give or giving preference in the resale in the respective department stores of the respondents to the merchandise of those manufacturers or sellers who grant such discriminatory prices.

e. By utilizing or employing a preferred group of manufacturers or sellers or preferred resources, classification in which is dependent upon such manufacturers' or sellers' agreeing to allow discriminations in price to the respondents and refusing to buy from manufacturers and sellers who do not allow such discriminatory prices.

Heck Sees Freezer--

(Concluded from Page 1, Column 4)

sales" of home freezers and the new two-temperature refrigerators containing frozen food storage space, Mr. Heck thinks that mass market sales of the standard type of refrigerator will account for the majority of the business for some time to come.

"Home freezer demand in the immediate postwar period will be influenced to a great extent by whether or not rationing is continued after the war, how rapidly and extensively the food industry makes frozen foods available, and how valid are the widely divergent predictions of consumers' postwar purchases," he said.

Mr. Heck was associated with the Westinghouse plant in Mansfield from 1936 to 1939, serving first as central district sales supervisor for the full line of electrical appliances, then as sales promotion manager of that district, and later in the sales department of the headquarters refrigeration section.

In 1939 he became merchandise manager of Westinghouse Electric Supply Co. in Cleveland, but returned to the appliance division in November, 1943, dividing his time between the "Health for Victory" nutrition program and home freezer and refrigeration marketing and distribution.

Sunroc Appoints Kelnard

NEW YORK CITY—Kelnard Service, Inc., 3108 Northern Blvd., Long Island City, was recently appointed the metropolitan service dealer for Sunroc water coolers.

Carter Heads--

(Concluded from Page 1, Column 3)

tribution work, he was named headquarters office manager of the Ice Cream Cabinet Division in 1937.

He became district sales manager for the division in 1938, handling ice cream cabinet sales in Michigan, Indiana, and Kentucky, and in 1941 undertook additional Midwest territorial activities.

Ralph J. Scheu, former head of the division, who was assigned early in the war to important work in connection with the company's war production, will continue in that capacity until war needs are met.

Correction

A story in the April 23 issue of the NEWS gave OPA ceiling prices on a milk cooler line being introduced by the "Erie" Cooling Co. of Winona, Minn. The firm's name is actually the Frie Cooling Co., and produces the "Frie-zer" milk cooler line, as well as home freezers and home appliances.

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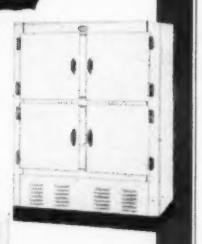
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Many sizes available for civilian and governmental requirements.
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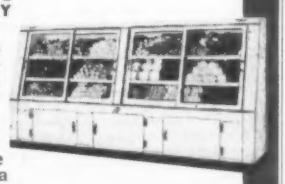
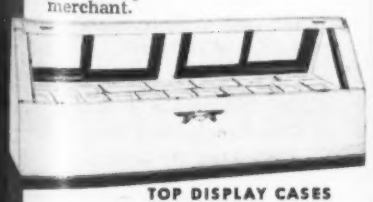
America's finest Refrigerated Produce Display Case. The self-serve Dairy Case represents a vital need for the modern-day merchant.


TOP DISPLAY CASES
The Sherer *distributor franchise* is available now! Write or wire today.
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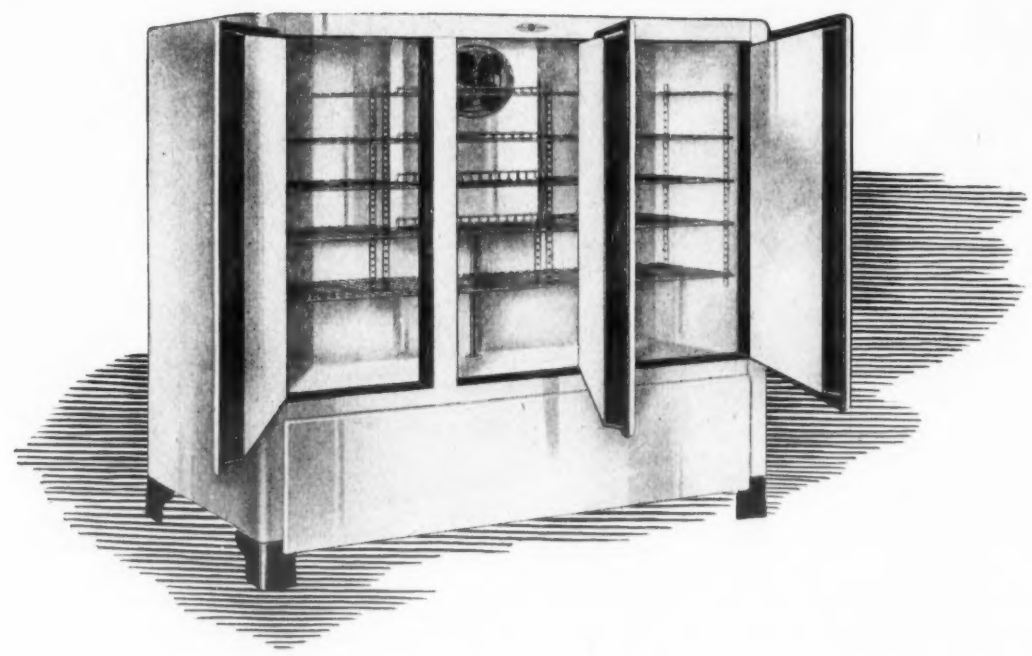
DISPLAY AND STORAGE EQUIPMENT FOR RETAIL FOOD STORES
SHERER-GILLETT CO.
MARSHALL, MICHIGAN



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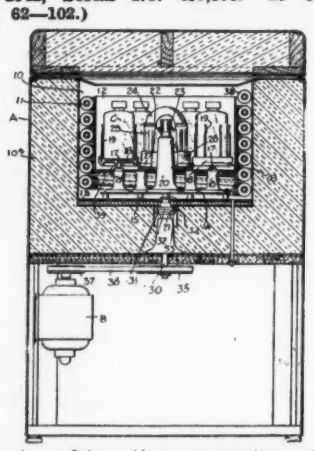
...the Leader in COMMERCIAL REFRIGERATION
WRITE for detailed description of our Reach-in Cabinets • *Models 60 - 50 - 30 and 20 cubic feet*
SAINT PAUL 6, MINNESOTA
ST. PAUL 6 NEW YORK 17 BOSTON 15 LOS ANGELES 14

PATENTS

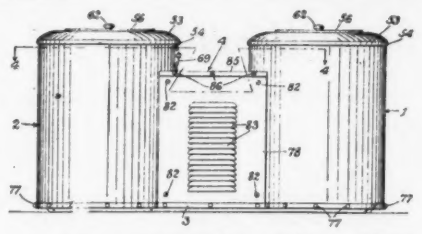
Weeks of April 17 & 24

2,373,806. REFRIGERATING APPARATUS. Eugene L. Barnes and Herman A. Brenner, Buffalo, N. Y. Application Sept. 23, 1942, Serial No. 459,396. 13 Claims. (Cl. 62—102.)



1. A refrigerating apparatus of the character described comprising a cabinet having a refrigeration chamber, refrigerating means for causing cold air to circulate in said chamber, a plurality of rotatable members, mounted within said chamber means in connection with each of said members for receiving a container partially filled with material, and means for rotating each of said rotatable members at relatively high speed sufficient to form a substantially thin walled hollow shell of material within such containers to expedite the freezing of the material.

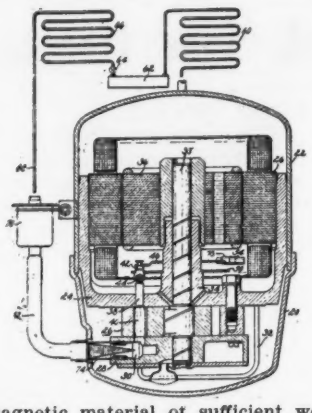
2,373,905. REFRIGERATING APPARATUS. Willard L. Morrison, Lake Forest, Ill. Original application Aug. 2, 1941, Serial No. 405,173, now Patent No. 2,356,781, dated Aug. 29, 1944. Divided and this application Feb. 19, 1944, Serial No. 523,017. 7 Claims. (Cl. 62—89.)



1. In a refrigerating device, a base member, an insulating disc member of substantial thickness, resting upon the upper surface of said base member, securing means extending from one such member into the other, a cylindrical open-topped evaporator member having a closed bottom resting upon the upper face of said disc member, securing means extending from one such member into the other, said evaporator member including inner and outer generally concentric walls having therebetween a space for the flow of a volatile refrigerant, an outer cylinder having a lower extremity engaging the exterior of said insulating disc member, said outer cylinder being generally concentric with said evaporator member, a mass of insulating material in the space defined by said insulating disc member, said evaporator member and said outer cylinder, inlet and outlet ducts for said evaporator member embedded in said insulating mass, the inner surface of said evaporator member defining an open-topped storage space, a removable closure element for said storage space and means for supporting it, when closed, out of contact with said evaporator and at a level above that of the cold air within the evaporator.

2,373,909. REFRIGERATING APPARATUS. Melvin P. Penn, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Sept. 25, 1941, Serial No. 412,306. 2 Claims. (Cl. 230—24.)

1. An electric motor-compressor unit comprising an electric motor and a compressor driven by the electric motor, said unit being provided with an unloading passage connecting the compressor inlet and outlet, a pivoted member, a valve normally open during idle periods and connected to said pivoted member for closing said unloading passage, said member being provided with an armature



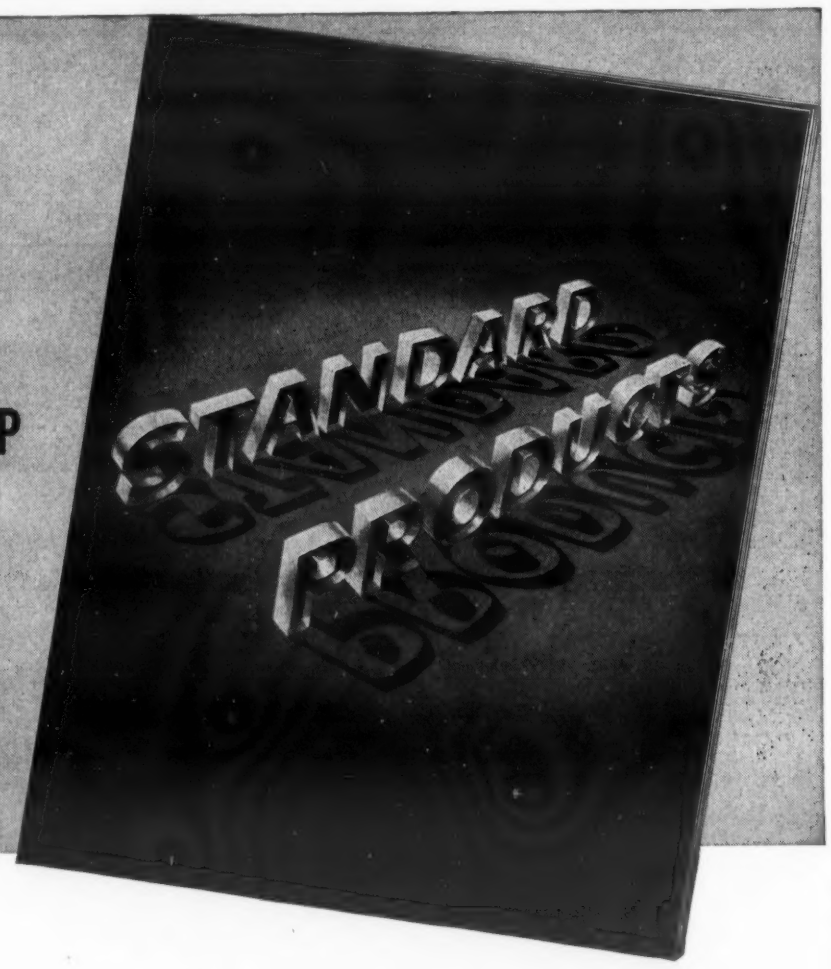
of magnetic material of sufficient weight and leverage to cause the lever to be titled to a position to open the valve when the motor is deenergized and so located adjacent the motor as to be in the magnetic field of the motor when energized to operate the lever to close the valve upon energization of the motor and to hold the valve closed throughout the continued energization of the motor.

2,374,184. ABSORPTION REFRIGERATING APPARATUS. Nils Erland af Kleen, Stockholm, Sweden, assignor to Kleen Refrigerator, Inc., Hoboken, N. J., a corporation of Delaware. Application Aug. 6, 1941, Serial No. 405,575. 15 Claims. (Cl. 62—118.)

1. In a refrigerator including an insulated storage space and refrigerating apparatus of the absorption type for cooling said space, in combination, a primary system formed by a plurality of interconnected parts for the circulation of the refrigerant, said system including a condensing element for liquefying refrigerant, a secondary system formed by a plurality of interconnected parts for the circulation of a cooling medium in heat exchange relation with a portion of said primary system, said secondary system including a condensing element for liquefying the cooling fluid, said first and second named condensing elements being arranged in a flue space formed by four substantially vertical walls, one of said walls being the insulated rear wall

(Concluded on next page, Col. 2)

A NEW CATALOGUE THAT WILL HELP YOUR PRODUCT PLANNING



TO HELP you in your product planning, THE STANDARD PRODUCTS COMPANY has just compiled a comprehensive brochure which contains many valuable suggestions in the use of plastics, molded rubber and steel stampings.

Attractively illustrated in this new brochure are STANDARD PRODUCTS COMPANY'S full line of widely diversified products which include: thermo-plastics, thermo-setting plastics and mechanical rubber goods—glass run window channel, automotive hardware and munitions.

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DRAFTSMAN and engineer for heating, ventilation, and air conditioning. KROESCHELL ENGINEERING CO., 215 West Ontario St., Chicago.

OUR REFRIGERATION Service Men earn $5,000-$7,500 annually. Nationally recognized as foremost refrigeration service and installation organization in the country. Sixteen years in service business—Chicago and Detroit. Permanent positions to capable service men. Executive advancement possibilities in postwar expansion program. REFRIGERATION MAINTENANCE CORP., 321 E. Grand Ave., Chicago.

AIR CONDITIONING maintenance mechanic, experienced on self-contained units ranging from 1 to 20 tons. TANAGER CONSTRUCTION CORP., 1400 Broadway, New York, N. Y.

SALES MANAGER. Nationally known automatic control manufacturer has opening for sales manager of refrigeration control division. Must have refrigeration engineering background. State full details, education, work background, and salary first letter. Interview may be arranged. Box 1693, Air Conditioning & Refrigeration News.

OPPORTUNITY of a life time for an experienced man to establish and manage a refrigeration and air conditioning supplies department in Texas for a large, well known company. Write full details of your background, giving seven references in the industry. Box 1704, Air Conditioning & Refrigeration News.

SALESMEN: Refrigeration parts supply jobbing house; New York City area; splendid opportunity. Box 1705, Air Conditioning & Refrigeration News.

SEVERAL excellent openings for automatic washer, domestic ironer, and dryer engineers for new plant to be opened in California. Our own organization knows of this advertisement. In first letter please give full details of experience and salary requirements. Box 1711, Air Conditioning & Refrigeration News.

WANTED: Draftsman with experience in Finned Tubing, Heating and Cooling, Coils, Condensers. Must understand heat transfer problems. This is a permanent position. Box 1715, Air Conditioning & Refrigeration News.

EXPERIENCED refrigeration cabinet design engineer. War work at present. Excellent postwar opportunity. Box 1723, Air Conditioning & Refrigeration News.

WE REQUIRE thoroughly experienced, responsible man, engineering background, take charge sales for Midwest. Product is recognized leader in its field and is sold to manufacturers and jobbers. Age 30-38. Remuneration excess of $7,000 yearly to man who qualifies. Give complete history, including photograph. Box 1727, Air Conditioning & Refrigeration News.

OPPORTUNITY for service man for steady job with exceptional future. Old established company that normally employs three men. Will start man at $85 with definite assurance that increase will be made in keeping with man's ability. It will pay you to investigate this. Box 1728, Air Conditioning & Refrigeration News.

OLD ESTABLISHED Connecticut concern representing outstanding nationally known industrial and commercial refrigeration, air conditioning, and oil burner manufacturers, has position open for manager of operations. Requires engineer with executive ability, sound background estimating, sales and installation, with special emphasis on refrigeration and air conditioning. Give full details, confidential. Box 1729, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER, industrious and reliable, to take charge of erection and service department. Permanent position and fine opportunity with a well established and expanding York distributorship. Address AIR CONDITIONING & REFRIGERATION, 27 E. Second St., Dayton 2, Ohio.

BUSINESS OPPORTUNITIES

LONG ESTABLISHED contracting Commercial Refrigeration and Air Conditioning business in Los Angeles, and distributor for reputable national refrigeration manufacturer, will sell to aggressive organization. $35,000 required. Box 1714, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

WISH TO establish relations with renowned manufacturers of Household refrigerators, air conditioning, and ice plants. AMERICAN REFRIGERATOR CO., P. O. Box 500, Calcutta, India.

DISTRIBUTORSHIP WANTED for the state of Maryland or adjacent territory for line of domestic refrigeration, radios, and allied lines, by a well-established refrigeration sales and service organization with 13 years experience. Write Box 1719, Air Conditioning & Refrigeration News.

POSITIONS WANTED

SALES EXECUTIVE. Capable, energetic, progressive, producer. National experience. Background 17 years sales for manufacturers, four years specialty distributor, four years production. Experienced domestic and commercial refrigerators, frozen food units, air conditioning, electric and radio equipment. Seek position of responsibility, organizing, and developing new business. Box 1706, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER desires connection where abilities can be used to best advantage. Eighteen years refrigeration experience; seven years as service men; four years teaching refrigeration and air conditioning; six years field application engineer for manufacturer of commercial coils and evaporators. Registered Professional Engineer. Box 1717, Air Conditioning & Refrigeration News.

THERMAL ENGINEER, nine years air conditioning, refrigeration, ventilating, and heating, 15 years total mechanical equipment experience in design and application, wishes permanent connection with dealer, consulting engineer, or industrial concern desiring services of competent man. Experience has included industrial, commercial, and experimental air control. Box 1722, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

500 RE-MANUFACTURED Frigidaire and Kelvinator ⅓, ¾, 1, and 1½-H.P. air cooled condensing units with new condensers and new single phase 110/220 60 cycle motors. 2 to 12 holes ice cream cabinets. Write for list and prices. EDISON COOLING CORP., 310 East 149 St., New York 51, N. Y.

FOR SALE: Isobutane refrigerant. Price small lots—$1 per pound; in lots of 100 pounds, 65 cents per pound. Freez-O, a perfect refrigerant for Frigidaire Meter Miser—price in small lots $1.50 per pound; lots of 100 pounds $1 per pound. Send your cylinders to STANDARD REFRIGERATION CO., McKees Rocks, Pa.

ELECTRIC WATER heaters. Portable, sanitary, durable, and economical. Two sizes only. Ten and 18 gallon capacities. Automatic, adjustable thermostat. Workmanship and materials guaranteed for one year. Milk Can and Milk Bottle Wash Tanks, Sterilizers, etc. No priorities needed. Write Box 1718, Air Conditioning & Refrigeration News.

USED double duty display cases. Dairy wall cases. Vegetable stands. Self-service cases. Beverage coolers. Reach-ins, Walk-ins, freezers, frosted food cabinets. Coils, blowers, compressors. Write today! Box 1721, Air Conditioning & Refrigeration News.

NEW CHIEFTAN air cooled condensing units complete with low pressure controls and in original factory crates. ⅓ hp. $80.83, ½ hp. $108.87 each. Quantities of 10 or more 10% discount. AA3 priority required. All prices crated F.O.B. Kansas City, Mo. 25% with order. ARCTICAIRE REFRIGERATION CO., 3939-41 Broadway, Kansas City, Mo. Tel. Westport 9667.

DRY BEVERAGE coolers. Double duty. New wall type dairy and vegetable display cases 6-feet and 8-feet long. New milk cooler, no priority 4-can $220; 6-can $245. Frosted food cabinets, self-contained Reach-ins, Walk-ins, compressors, diffusers. JORDON REFRIGERATOR CO., 235 N. Broad St., Philadelphia 7, Pa.

FOR SALE: Several sizes and designs of well-insulated refrigerated cabinets complete with compressors which you can quickly rebuild into commercial reach-in refrigerators or beverage coolers. This is your opportunity! Write for details. POWERS EQUIPMENT CO., West Ave., Jenkintown, Pa.

2 WESTINGHOUSE Air Cooling Compressors. A.C. Induction Motors. 1½ hp.—1 phase—60 cycles—220 volts—110 volt control. ("Freon") 2 cyl. recp.-type—RWI serial 3134, style 861197, Test pressure: high side—250 sq. in.; low side—125 sq. in. Box 1720, Air Conditioning & Refrigeration News.

OFFER for sale one used 12-ton Voss Ice Machine, will sacrifice. Write to us for further details. E. GREENEBAUM CO., 328 East 103rd St., New York City.

EQUIPMENT WANTED

WE NEED immediately a Frick-Universal model S (15 ton) complete compressor assembly. Can use the complete 15-hp. condensing unit. Wire or write J. A. WALSH & CO., INC., Box 1773, Houston, Tex.

WHAT HAVE YOU? We buy any quantity of surplus refrigeration parts, tools, and equipment. Such as new and used units, compressors, motors, controls, valves, strainers, coils, seals, cube trays, defrost pans, refrigerator hardware, and complete shops with equipment. WOOL-SEAL, 293 E. 149th St., New York 51, N. Y.

DISTRIBUTOR

of motor starting condensers in OHIO would like to represent allied products suitable to refrigeration jobbers, motor repair shops, and motor manufacturers. 13 years of established business. Financially responsible.

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$35,000 STOCK OF COMMERCIAL REFRIGERATION SERVICE PARTS FOR SALE

At a fraction of original cost; Consists of expansion Valves, all types; Controls, Seals, Compressor parts, rubber belts, fittings, motor brushes, bearings and hundreds of other parts, never used; all new; no detailed inventory list available. Must be seen to appreciate value. Reason for disposal: We have discontinued refrigeration service parts business; now exclusively in war production. Deferred payments accepted if entire stock is purchased.

REFRIGERATION CORP. OF AMERICA
241 W. 64, N.Y. 23. End 2-4100. Mr. Wise.

For TRUCKS, LOCKERS, COOLERS, COUNTERS, CABINET CONVERSIONS, use
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LANSING, MICH., U.S.A.

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Distributors of refrigeration and insulation. Get particulars on our NEW
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the Modern way to Conserve food
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47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

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Your letterhead will bring our latest catalog—also our House Organ,
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1825-29 W. Fonddulac, Milwaukee

REFRIGERATION PRODUCTS
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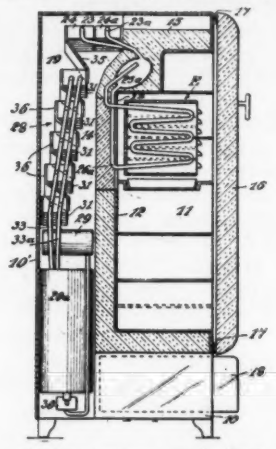
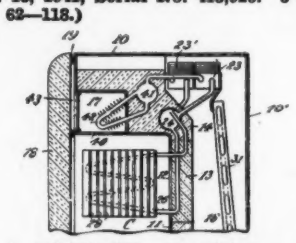
Patents (Cont.)

(Concluded from preceding page)



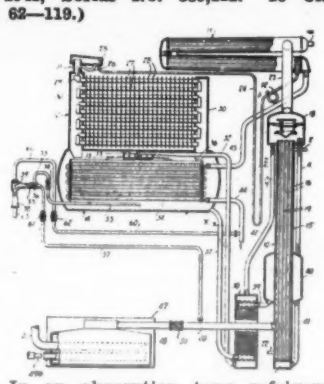
of the storage space, said first named condensing element being arranged in the upper portion of said flue and disposed in a recess provided in said rear insulated wall, and said second named condensing element being disposed below said first named condensing element, and means for separating the airflow through said flue into separate streams for the respective condensing elements.

2,374,185. REFRIGERATOR. Nils Erland af Kleen, Stockholm, Sweden, assignor to Kleen Refrigerator, Inc., Hoboken, N. J., a corporation of Delaware. Application Nov. 13, 1941, Serial No. 418,925. 3 Claims. (Cl. 62—118.)



1. A refrigerator comprising a cabinet having thermally insulated top, bottom, rear, and side walls forming a food storage compartment having an opening, a door closing said opening, said rear wall having an inwardly extending bent portion adjacent its upper end reducing the depth of the upper portion of said compartment and providing a recess at the back thereof, a partition dividing said compartment into a main storage space of predetermined depth and an auxiliary storage space of reduced depth, refrigeration apparatus including two separate cooling sections in said auxiliary storage space and cooling means in the upper portion of said main storage space, said cooling means including two separate cooling sections arranged in indirect thermal transfer relation with respect to each other for cooling the air in said main storage space, and separate refrigerant storing means in said recess to flow liquid refrigerant intermittently to one of each of said cooling sections in said auxiliary storage space and said main storage space, respectively, in phase relation to the other of each of said cooling sections in said auxiliary and main storage spaces.

2,374,521. REFRIGERATION. Philip P. Anderson, Jr., Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 18, 1941, Serial No. 389,112. 10 Claims. (Cl. 62—119.)



1. In an absorption type refrigeration system having a plurality of interconnected parts including an evaporator in which evaporation of liquid refrigerant takes place, an absorber comprising an elongated vessel having openings at opposite ends through which refrigerant vapor is introduced from said evaporator, and a heat receiving part, means to heat said heat receiving part by steam delivered from a source of supply, means to effect cooling of said absorber by cooling water delivered from a source of supply, a vacuum pump, and a conduit connecting said pump and an intermediate region of said vessel constituting the farthest point in the path of flow of non-condensible gases swept into such region by the refrigerant vapor, said vacuum pump comprising a two-stage ejector, the first stage of said ejector being operable by steam from said source of supply and the second stage of said ejector being connected to said first stage and operable by water supplied thereto under pressure from its source of supply.

Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves
ALCO VALVE COMPANY • ST. LOUIS, MO.

Westinghouse Appoints Bailey to Northwest Post

SEATTLE—Appointment of H. E. Bailey as district utilities manager for the North Pacific District of the Westinghouse Electric Supply Co., with headquarters in Seattle, has been announced by W. M. Jewell, manager of the district. In his new position Mr. Bailey will have complete responsibility for the development of all public and private utility business.

MacKenty in New Post With Radio Corp.

NEW YORK CITY—John G. MacKenty, vice president and general manager of Radio-marine Corp. of America, is managing director of the international division which has been formed by Radio Corp.

The new division, with headquarters here, will supervise foreign sales and other activities of the company and its subsidiaries outside the United States.

Bloomberg Heads Electromaster Commercial Cooking Dept.

DETROIT—Russell Bloomberg has been named manager of Electromaster, Inc.'s commercial cooking equipment division.

Mr. Bloomberg was with Edison General Electric Appliance Co. for 23 years. There he specialized in heavy duty cooking equipment as food service engineer. For years he has been in close contact with chefs and kitchen managers in all parts of the country as a heavy duty equipmen specialist. In addition he has spent considerable time in dealer training work.

LUD EMDE

P. FRED LESLEY

In reporting the appointment of Lud Emde and P. Fred Lesley as new executives of Temprite Products Corp. in the May 7 issue, the wrong names appeared under the cuts. The News regrets the error and herewith publishes the pictures as they should have appeared.

Daugherty Joins American

KANSAS CITY, Mo. — Appointment of Leo J. Daugherty as Kansas City district sales manager for the American Central Mfg. Corp., is announced by C. Fred Hastings, general sales manager.

Prior to his connection with American Central, Mr. Daugherty was associated with Nash Co.-St. Louis as district manager, and with Nash-Kelvinator Corp. in general sales activities.

NOTE:: MANUFACTURERS
Refrigeration concern interested in representing manufacturers as Service Department in the New York Metropolitan area.
We maintain a large service organization with factory trained employees.
Old established concern competent to service all types of equipment, including condensing units, motors, automatic controls, etc.
Write for information—
Box 1731, Air Conditioning & Refrigeration News.

IMPERIAL TORPEDO DEHYDRATOR

IMPERIAL TORPEDO DEHYDRATOR
Your best weapon in the war on moisture.
One piece streamlined shell.
Fewer joints — no soft solder — less chance of leakage.
Copper and brass construction.
Packed with "Silica Gel".

● Keeping old refrigeration systems in good shape these days calls for more frequent repairs. And every time a unit is torn down, it is essential that all possibility of moisture be eliminated—a job for a dehydrator. Never before has the dehydrator been so important as it is today.

For drying out a system the most effective weapon in the war on moisture is the Imperial Torpedo Dehydrator. This is the unit that has introduced an entirely new standard of dehydrator design and dehydrator efficiency, and has established an amazing performance record since it was first introduced a few years ago.

THE IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago 7, Ill.

Emblem of Quality
IMPERIAL

Fittings • Valves • Dehydrators • Filters • Floats • Charging Lines • Tools for Cutting, Flaring, Bending, Coiling, Pinch-off and Swedging

Two Unit Model--

(Concluded from Page 1, Column 2)

each acting independent of the other. The model to be made first will have 8 cu. ft. of refrigeration storage space, and 2 cu. ft. of freezing compartment. The latter area will hold up to 64 pounds of food, and will maintain temperatures below zero, the announcement said.

While the public presentation of the combination unit is being made for the first time, Mr. Schafer said that it was designed and developed before 1942 as a step toward "home freezer benefits for those not having space for the installation of two separate units."

The new addition to the Hotpoint refrigerator line will have "wall-concealed" evaporators and defrosting will be automatically controlled by a clock. Glass covered food holders and other deluxe appointments are planned, he said; adding:

"While the new model, being a departure from conventional units, is interesting as a step forward in electric refrigeration, the large volume of refrigerator sales in immediate postwar will be for conventional models. The design of these units will be not unlike that of 1942. We are aware that 1942 models were highly advanced—considerably better than previous models—and that very few of them were produced."

Mr. Schafer said that selling prices will be in keeping with pre-war prices, with increased cost of manufacture being absorbed, over a long period, by increased production and new techniques creating larger sales volume. He said that the new combination refrigerator would sell for a price reflecting the additional material and labor necessary to production. The early production of all lines will be small, but rapid increases is output should result in reaching 1942 production within a year of reconversion.

During the war period Hotpoint has emphasized "complete electric kitchens" in its national advertising, with a basic merchandising course being mailed to dealers for home study. Mr. Schafer said that introduction of "complete kitchen" merchandising would give appliance dealers a "dramatic new vehicle for merchandising." He pointed out that single refrigerator sales would out-number "complete planned ensembles"; but, the store that displays its appliances in operating home surroundings will have an advantage over one not dramatizing "use-values." Hotpoint will continue to promote "ensemble sales" of appliances in postwar, he said.

L-38 Revoked--

(Concluded from Page 1, Column 4)

Order L-38 could not be considered as giving any assurance that materials required to produce the product will be available.

Manufacturers must continue to fill orders in conformity with Priority Regulation 1, which means that all military rated orders must be filled first, and then civilian orders in the sequence of their rating pattern.

What happens now if a dealer in the field has a civilian order—say a refrigerator for use in a hospital—which has some degree of urgency? Provision is being made for him to apply for a rating, probably on Form 541, with the WPB local office. More details on this will probably be given later by WPB headquarters.

There has been a further tightening of restrictions on the use of MRO ratings for condensing units and low-side assemblies. Direction 10 to Priorities Regulation 3, issued May 12, states that the blanket MRO ratings under Priorities Regulation 3 cannot be used to get such equipment. This restriction thus takes the place of the one that was incorporated in paragraph "(d)" of Order L-38.

The General Refrigeration and Air Conditioning Industry Advisory Committee, meeting here this week, was informed that no cuts in military orders for refrigeration and air conditioning equipment are foreseen in the immediate future.

The fact remains, however, that revocation of L-38 opens the way for unrestricted production of civilian commercial refrigeration equipment.

Okinawa Account--

(Concluded from Page 1, Column 2)

about them makes me dream of coca cola, with real ice.

But the story of what whole blood is doing for badly wounded soldiers is one of the most dramatic of the war. The blood is shipped cold, in heavily insulated containers and upon arrival here is immediately transferred to a waiting reefer. At the air terminal a Hussmann-Ligonier reefer is located in the center of a large revettement provided to protect wounded waiting air evacuation. With modern refrigeration of this type available, the whole blood can be kept for 21 days.

Military experts have estimated that the number of fatal casualties on Iwo Jima would have been doubled were it not for the plasma and whole blood supplied to the wounded by surgeons working in the front lines. It is safe to assume that the same is true here on Okinawa.

I went to the foremost positions of the 96th Division and watched a wounded boy brought out of the lines. He was given transfusions of plasma immediately, and later was given whole blood.

This morning I said goodbye to that soldier at the air evacuation center here on Okinawa as Army physicians turned him over to the care of an immaculate flight nurse. He had lost one eye, and may lose a foot, but he was smiling because he was alive and because he was going home!

Whole blood, preserved by American refrigeration equipment, had saved his life.

Let Freedom Ring

Another milestone in world Liberty has been reached. The once flickering torch of Freedom now shines brightly and clearly, lighting the road to complete liberation for millions who a short time ago felt that life itself had little to offer.

As individuals, most of us shall never know, never understand, just what this means . . . nor can we be expected to understand, for our land has been so free of the horrible penalties of total war . . . so Free!

Let us, then, be grateful that we have been granted the moral and physical powers to do the things required of us. Let us pray that we may be given the power to do them until the whole world is Free.

☆ ☆ ☆

Then conquer we must, when our cause it is just,
And this be our motto . . . "In God is our trust."

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